ORDER NO. MKE0502800C1
B3

Service Manual

DVD/VCR DECK

PbF
Solder Lead free

PV-D4735S
PV-D4745
PV-D4745S
PV-D4745S-K

For servicing the R4-Mechanism Chassis for PV-Model, Please refer to the R4-Mechanism-Chassis-for-PV-Model Service Manual (Order No. MKE0401000C1).

Panasonic®

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ITEM		SPECIFICATION
VCR	Video	Head: 4 rotary heads helical scanning system
		Input Level: VIDEO IN Jack (Phono type) 1.0 Vp-p 75 Ω unbalanced Output Level: VIDEO OUT Jack (Phono type) 1.0 Vp-p 75 Ω unbalanced
	Audio	Head: Normal Mono: 1 stationary head Hi-Fi Stereo: 2 rotary heads
		Input Level: AUDIO IN Jack (Phono type) -10 dBv 50 kΩ unbalanced Output Level: AUDIO OUT Jack (Phono type) -8 dBv 1kΩ unbalanced
	Tuner	Broadcast Channels: VHF 2~13, UHF 14~69 CABLE Channels: Midband A through I (14~22) Superband J through W (23~36) Hyperband AA~EEE (37~64) Lowband A-5~A-1 (95~99) Special CABLE channel 5A (01) Ultraband 65~94, 100~125
	Tape Format	Tape width 12.7 mm (1/2 inch) high density tape
	RF Out	CH 3/CH 4 switchable 72 dBμ (open voltage) 75 Ω unbalanced
	Tape Speed	SP: 1-5/16 i.p.s (33.35 mm/s) SLP: 7/16 i.p.s (11.12 mm/s) Record/Playback Timer: 8 hr. with 160 min. type tape used in SLP mode
DVD	Discs Played	(1) DVD-VIDEO disc: DVD-AUDIO disc (PV-D4755/PV-D4755S-K Only): 12 cm (5 inch) single-sided, single-layer 12 cm (5 inch) single-sided, double-layer 12 cm (5 inch) double-sided, double-layer (one layer per side) 8 cm (3 inch) single-sided, single-layer 8 cm (3 inch) single-sided, double-layer 8 cm (3 inch) double-sided, double-layer (one layer per side) DVD-RAM disc: 12 cm (5 inch) 9.4 GB (double-sided) and 4.7 GB (single-sided) 8 cm (3 inch) 2.8 GB (double-sided) (2) Compact disc (CD-DA, Video CD) (CD-R/CD-RW, MP3, JPEG): 12 cm (5 inch) disc, 8 cm (3 inch) disc

ITEM		SPECIFICATION
DVD	Digital Audio Output	Digital optical connector
	DVD Video Output	S-VIDEO Output Jack (S4P) Component Video Output Jack (Phono type) Video Output Jack (Photo type)
	DVD Audio Output	Audio Output 1, 2 (L), (R) Jack (Phono type)
	Pickup	Wave length: 655 nm (DVD), 790 nm (Video CD/CD) Laser power: CLASS II
GENERAL	Power	Source: 120 V AC ± 12 V AC, 60 Hz ± 3 Hz
		Consumption: Approx. 22 W (Power on), Approx. 0.9 W (Power off)
	Television System	EIA Standard (525 lines, 60 fields) NTSC Color Signal
	Operating Condition	5 °C - 40 °C (41 °F - 104 °F) (Temperature) 10 % - 75 % (Humidity)
	Dimension (W x H x D)	430 mm x 93 mm x 255 mm (16-15/16 inch x 3-11/16 inch x 10-1/16 inch)
	Weight	3.7 kg (8.2 lbs.)
	Solder	This model uses lead free solder (PbF).

Weight and dimensions shown are approximate.
Designs and specifications are subject to change without notice.

⚠ WARNING

This service information is designed for experienced repair technicians only and is not designed for use by the general public.
It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product.
Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

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1 SAFETY PRECAUTIONS

GENERAL GUIDELINES

1. **IMPORTANT SAFETY NOTICE**

   There are special components used in this equipment which are important for safety. These parts are marked by ⚠ in the Schematic Diagrams, Circuit Board Layout, Exploded Views and Replacement Parts List. It is essential that these critical parts should be replaced with manufacturerís specified parts to prevent shock, fire or other hazards. Do not modify the original design without permission of manufacturer.

2. An Isolation Transformer should always be used during the servicing of DVD VCR whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect DVD VCR from being damaged by accidental shorting that may occur during servicing.
3. When servicing, observe the original lead dress. If a short circuit is found, replace all parts which have been overheated or damaged by the short circuit.
4. After servicing, see to it that all the protective devices such as insulation barriers, insulation papers shields are properly installed.
5. After servicing, make the following leakage current checks to prevent the customer from being exposed to shock hazards.

LEAKAGE CURRENT COLD CHECK

1. Unplug the AC cord and connect a jumper between the two prongs on the plug.
2. Measure the resistance value, with an ohmmeter, between the jumpered AC plug and each exposed metallic cabinet part on the equipment such as screwheads, connectors, control shafts, etc. When the exposed metallic part has a return path to the chassis, the reading should be between 1 MΩ and 5.2 MΩ. When the exposed metal does not have a return path to the chassis, the reading must be infinity.

LEAKAGE CURRENT HOT CHECK
(See Figure 1.)

1. Plug the AC cord directly into the AC outlet. Do not use an isolation transformer for this check.
2. Connect a 1.5 kΩ, 10 W resistor, in parallel with a 0.15 µF capacitor, between each exposed metallic part on the set and a good earth ground, as shown in Figure 1.
3. Use an AC voltmeter, with 1 kΩ/V or more sensitivity, to measure the potential across the resistor.
4. Check each exposed metallic part, and measure the voltage at each point.
5. Reverse the AC plug in the AC outlet and repeat each of the above measurements.
6. The potential at any point should not exceed 0.75 V RMS.

   A leakage current tester (Simpson Model 229 or equivalent) may be used to make the hot checks. Leakage current must not exceed 1/2 mA. In case a measurement is outside of the limits specified, there is a possibility of a shock hazard, and the equipment should be repaired and rechecked before it is returned to the customer.

Hot-Check Circuit

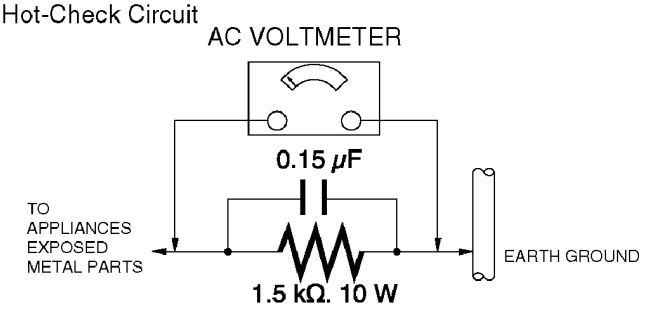


Figure 1

1.1. LASER PRODUCT

CLASS I LASER PRODUCT

- This equipment is certified to comply with DHHS Rules 21 CFR Chapter 1, Subchapter J in effect as of date of manufacture. (Only for U.S.A.)

This equipment is classified as a Class I (Class 1) level LASER Product and there is no hazardous LASER radiation with the safety protection.

Caution:

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

Danger:

The serviceman should not remove the cover of drive unit and should not service because the drive unit is a nonserviceable parts. Please check that the labels.

Never touch the internal parts in order to avoid EXPOSURE TO VISIBLE LASER RADIATION.

Unplug the AC power cord to the equipment when opening the top cover.

When the power switch is On, do not place your eyes close to the front panel opening door or the other openings to look into the interior unit.

LASER Specification

Class I level A LASER Product (Class 1 level A LASER Product)

Wave Length: 640 - 670 nm (at DVD)

770 - 810 nm (at CD)

Laser Power: No hazardous radiation is emitted with the safety protection.

1.2. PRECAUTION OF LASER DIODE

CAUTION:

This unit utilizes a class III a laser. Visible laser radiation is emitted from the optical pickup lens when the unit is turned on:

1. Do not look directly into the pickup lens.
2. Do not use optical instruments to look at the pickup lens.
3. Do not adjust the preset variable resistor on the optical pickup.
4. Do not disassemble the optical pickup unit.
5. If the optical pickup is replaced, use the manufactures specified replacement pickup only.
6. Use of control or adjustment or performance of procedures other than those specified herein may result in hazardous radiation exposure.

2 PREVENTION OF ELECTRO-STATIC DISCHARGE (ESD) TO ELECTROSTATICALLY SENSITIVE (ES) DEVICES

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits, some field-effect transistors and semiconductor "chip" components. The following techniques should be used to help reduce the incidence of component damage caused by electrostatic discharge (ESD).

1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any ESD on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging ESD wrist strap, which should remove electrostatic charge for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an antistatic solder removal device. Some solder removal devices not classified as "antistatic (ESD protected)" can generate electrical charge sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate electrical charges sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

   CAUTION:

   Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.
8. Minimize bodily motions when handling unpackaged replacement ES devices. (Otherwise harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity (ESD) sufficient to damage an ES device).

“NOTE toCATV system installer:

This reminder is provided to call the CATV system installerís attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.”

3 ABOUT LEAD FREE SOLDER (PbF)

Distinction of PbF PCB:

PCBs (manufactured) using lead free solder will have a printing on the PCB.

(Please refer to figures.)

Printed case

CAUTION:

- Pb free solder has a higher melting point than standard solder;

  Typically the melting point is 50°F - 70°F (30°C - 40°C) higher.

  Please use a soldering iron with temperature control and adjust it to 700°F ± 20°F (370°C ± 10°C).

  In case of using high temperature soldering iron, please be carefull not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).
- All products with the printed circuit board with printing must be serviced with lead free solder.

  When soldering or unsoldering, completely remove all of the solder from the pins or solder area, and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

Recommendations

Recommended lead free solder composition is Sn96.5 Ag3.0 Cu0.5.

4 SERVICE NOTES (PLEASE READ)

4.1. SELF-DIAGNOSIS INDICATION DISPLAY

Self-Diagnostic System facilitates finding the cause of the fault. The following data will be displayed on the Front Light-up Indicators (5 LEDs).

4.1.1. Transmission check for IIC BUS.

The condition of IIC bus transmission before shut off is displayed.

1. Press CH DOWN button on unit and 4 key on remote together in shut off or power off condition.

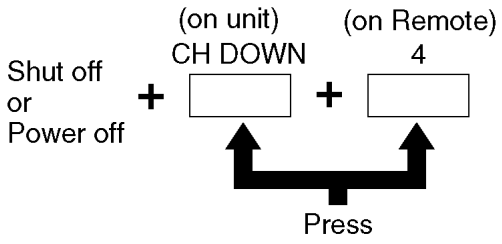


Fig. 1-1-1

2. To release from this mode, press any operation key on remote or turn on the power.

EXPLANATION OF IIC BUS TRANSMISSION

Condition of IIC bus transmission (IC6001◄►Tuner)	Condition of IIC bus transmission (IC6001◄►IC6004)	Condition of IIC bus transmission (IC6001◄►IC3001)	Condition of IIC bus transmission (IC6001◄►IC4201)	Front Light-up Indicators				
				VCR	REC	TIMER	PLAY	DVD
OK	OK	OK	OK	OFF	OFF	OFF	OFF	OFF
			NG	OFF	OFF	OFF	OFF	ON
		NG	OK	OFF	OFF	OFF	ON	OFF
			NG	OFF	OFF	OFF	ON	ON
	NG	OK	OK	OFF	OFF	ON	OFF	OFF
			NG	OFF	OFF	ON	OFF	ON
		NG	OK	OFF	OFF	ON	ON	OFF
			NG	OFF	OFF	ON	ON	ON
NG	OK	OK	OK	OFF	ON	OFF	OFF	OFF
			NG	OFF	ON	OFF	OFF	ON
		NG	OK	OFF	ON	OFF	ON	OFF
			NG	OFF	ON	OFF	ON	ON
	NG	OK	OK	OFF	ON	ON	OFF	OFF
			NG	OFF	ON	ON	OFF	ON
		NG	OK	OFF	ON	ON	ON	OFF
			NG	OFF	ON	ON	ON	ON

Fig. 1-1-2

4.1.2. VCR Mode of Error Code

The condition of VCR Mode before shut off is displayed.

1. Press CH DOWN button on unit and 1 key on remote together in shut off or power off condition.

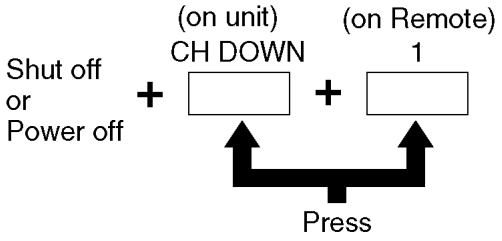


Fig. 1-2-1

2. To release from this mode, press any operation key on remote or turn on the power.

EXPLANATION OF VCR MODE

VCR Mode	Front Light-up Indicators					VCR Mode	Front Light-up Indicators				
	VCR	REC	TIMER	PLAY	DVD		VCR	REC	TIMER	PLAY	DVD
STOP	OFF	OFF	OFF	OFF	OFF	CUE	OFF	OFF	ON	OFF	ON
EJECT	OFF	OFF	OFF	OFF	ON	PLAY	OFF	ON	OFF	OFF	OFF
REW	OFF	OFF	OFF	ON	OFF	STILL	OFF	ON	OFF	OFF	ON
FF	OFF	OFF	OFF	ON	ON	REC	OFF	ON	OFF	ON	OFF
REV	OFF	OFF	ON	OFF	OFF	REC PAUSE	OFF	ON	OFF	ON	ON

Fig. 1-2-2

4.1.3. Mechanism of Error Code

The detecting condition and movement of mechanism is displayed.

1. Press CH DOWN button on unit and 2 key on remote together in shut off or power off condition.

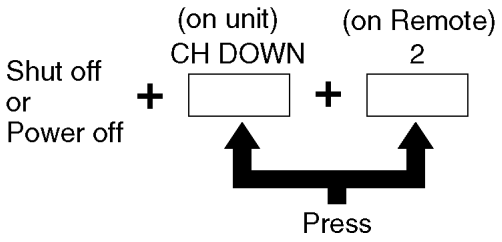


Fig. 1-3-1

2. To release from this mode, press any operation key on remote or turn on the power.

EXPLANATION OF ERROR CODE

Error Condition	Remedy / Check	Front Light-up Indicators				
		VCR	REC	TIMER	PLAY	DVD
No Errer		OFF	OFF	OFF	OFF	OFF
CYL PFG pulse can not be detected when the Cylinder starts.	Please check the Cylinder motor, Cylinder drive circuit and CYL PFG signal circuit.	OFF	OFF	OFF	OFF	ON
CAP FG pulse can not be detected during the Mechanism Initial operation (Tape rewinding by the S-Reel) at DOWN position.	Please check the Capstan motor, Capstan drive circuit and CAP FG signal circuit.	OFF	OFF	OFF	ON	OFF
Loading Lock during Loading operation at DOWN position.	Please check the Mechanism, Loading Motor, Drive circuit, Drive control signal circuit, Mode Select SW and the Mode Select SW input signal circuit.	OFF	OFF	OFF	ON	ON
Loading Lock during Unloading operation at DOWN position.	Please check the Mechanism, Loading Motor, Loading Motor drive circuit, Loading motor drive control signal circuit, Mode Select SW and the Mode Select SW input signal circuit.	OFF	OFF	ON	OFF	OFF
S-reel pulse can not be detected during Unloading operation.	Please check the Mechanism S-reel system, S-reel sensor, S-reel sensor input signal circuit, Capstan motor, Capstan motor drive circuit, Capstan control signal circuit, and so on.	OFF	OFF	ON	OFF	ON
Loading (cassette) Lock during Cassette Up operation.	Please check the Mechanism, Loading motor, Loading motor drive circuit, Loading motor drive control signal circuit, Mode Select SW and the Mode Select SW input signal circuit.	OFF	OFF	ON	ON	OFF
Head clog detection.	Clean the Cylinder Head.	OFF	ON	OFF	ON	ON
The position signal from Mode Select SW can not be detected.	Check Mode Select SW contact.	OFF	ON	ON	ON	OFF
CAP FG pulse can not be detected during Cassette in operation.	Please check the Capstan motor, Capstan motor drive circuit and the CAP FG signal circuit.	OFF	ON	ON	ON	ON
Cylinder Lock	Please check the Cylinder motor, Cylinder motor drive circuit and the CYL HSW signal circuit.	ON	OFF	OFF	OFF	OFF
S-reel Lock.	Please check Mechanism S-reel system, S-reel sensor, S-reel sensor input signal circuit, Capstan motor, Capstan motor drive circuit, Capstan control signal circuit, and so on.	ON	OFF	OFF	OFF	ON
T-reel Lock.	Please check Mechanism T-reel system, T-reel sensor, T-reel sensor input signal circuit, Capstan motor, Capstan motor drive circuit, Capstan control signal circuit, and so on.	ON	OFF	OFF	ON	OFF
Eject operation due to error condition.	Please check the Cassette tape, S-photo sensor, S-reel and Capstan system.	ON	ON	ON	ON	ON
Disc Motor of DVD Mechanism unit Error.	Please check the Disc Motor of DVD Mechanism unit, and confirm the DVD Service Mode2.	Flashing	Flashing	Flashing	Flashing	Flashing

Fig. 1-3-2

4.1.4. Reason for Eject of Error Code

When an eject operation due to error condition, the reason of ejection is displayed.

1. Press CH DOWN button on unit and 3 key on remote together in shut off or power off condition.

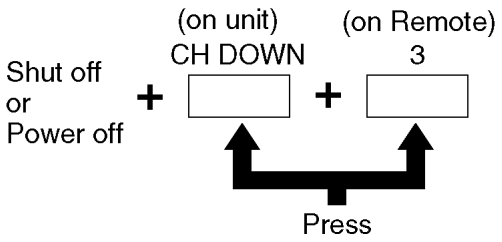


Fig. 1-4-1

2. To release from this mode, press any operation key on remote or turn on the power.

EXPLANATION OF CODE

Reason of Eject of Error Condition	Front Light-up Indicators				
	VCR	REC	TIMER	PLAY	DVD
Cassette tape is off from S-Post at Down position.	OFF	OFF	OFF	OFF	ON
Capstan motor can not rotate.	OFF	OFF	OFF	ON	OFF
Mechanism Lock during Loading operation at DOWN position.	OFF	OFF	OFF	ON	ON
Both ends of tape is detected at DOWN position.	OFF	OFF	ON	OFF	OFF

Fig. 1-4-2

4.1.5. Memory and Clear of Fault Code

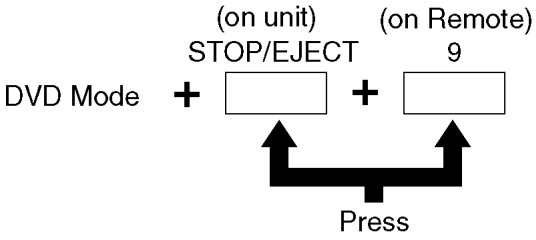
- Self-diagnostic data is memorized on EEPROM (IC6004) (latest Error code only).
- Self-diagnostic data is cleared by Memory all clear.

4.2. DVD SERVICE MODE

4.2.1. How to enter DVD Service Mode

1. Connect a TV Monitor.
2. Set the unit to DVD mode.
3. Press STOP/EJECT button on the unit and 9 key on the remote controller together with no cassette inserted.

   The unit will enter the DVD Service Mode 1.



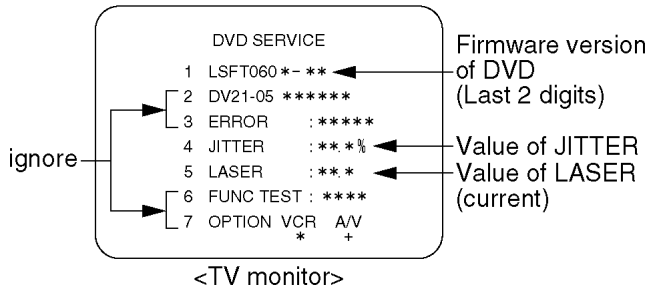


Fig. 2-1

4. Press the LEFT or RIGHT key on the remote again to enter DVD Service Mode 2.

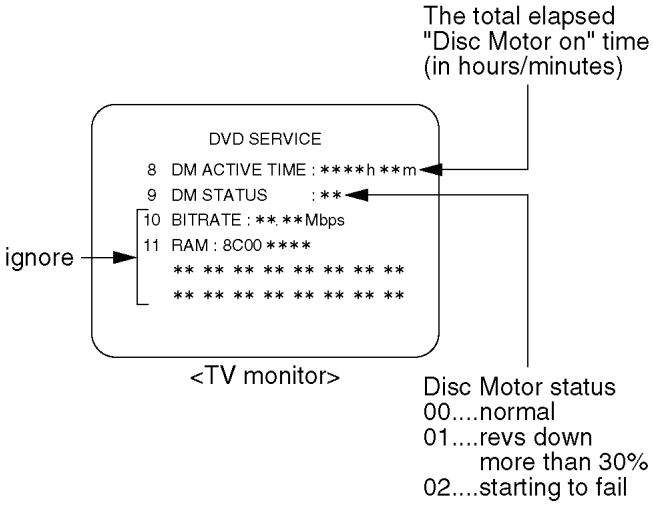

The total elapsed "Disc Motor on" time (in hours/minutes)
DVD SERVICE
8 DM ACTIVE TIME : ****h **m
9 DM STATUS : **
10 BITRATE : **.**Mbps
11 RAM : 8C00 ****
** ** ** ** ** ** ** **
** ** ** ** ** ** ** **
ignore
<TV monitor>
Disc Motor status
00....normal
01....revs down more than 30%
02....starting to fail

Fig. 2-2

Note:

a. After replacing the DVD Unit, press the CLEAR key on the remote in this mode. The total elapsed “Disc Motor on” time (in hours/minutes) will be cleared to 0.

b. If 01 or 02 is always displayed in 9 DM STATUS, replace the DVD Unit because the Disc Motor is defective.

5. To confirm the value of JITTER and the value of LASER (current), insert the DVD Test Disc into the DVD Unit.
6. To release from this mode, turn off the power.

4.2.2. Troubleshooting hint (standard) for this mode

It can be determine whether the DVD Mechanism Unit is defective by checking the value of JITTER and the value of LASER (current).

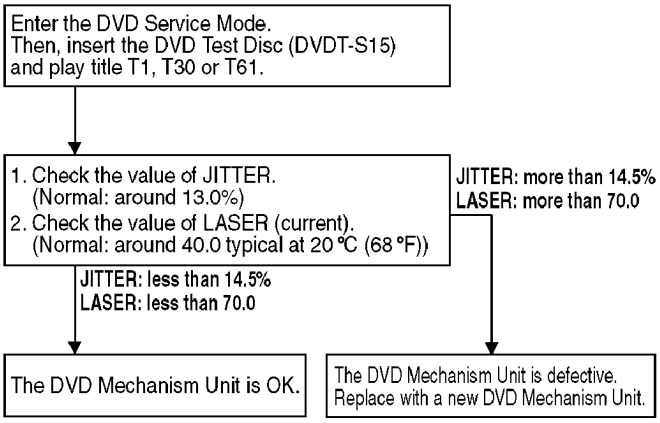

Enter the DVD Service Mode.
Then, insert the DVD Test Disc (DVDT-S15)
and play title T1, T30 or T61.
1. Check the value of JITTER.
(Normal: around 13.0%)
2. Check the value of LASER (current).
(Normal: around 40.0 typical at 20 °C (68 °F))
JITTER: more than 14.5%
LASER: more than 70.0
JITTER: less than 14.5%
LASER: less than 70.0
The DVD Mechanism Unit is OK.
The DVD Mechanism Unit is defective.
Replace with a new DVD Mechanism Unit.

Fig. 2-3

4.3. USAGE SCREEN MODE

Function displayed on the TV monitor:

- the total elapsed “Cylinder rotation” time (in hours)
- the total elapsed “DVD Play” time (in hours)

1. With power turned on and no cassette, press CH DOWN button on unit and 7 key on remote controller together.

   (The USAGE SCREEN will be displayed on the TV Monitor.)

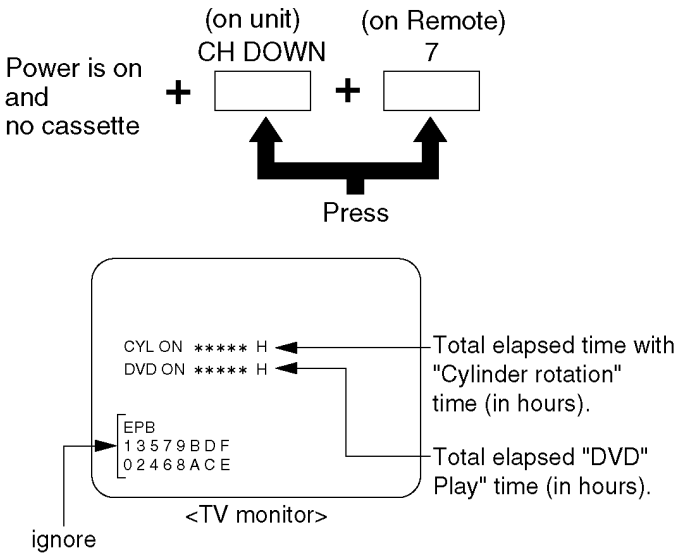


Fig. 3-1

Note:

1. After replacing the Cylinder Unit, press COUNTER RESET button on remote controller in this mode. Total elapsed “Cylinder rotation” time (in hours) will be cleared to 0.
2. After replacing the DVD Mechanism Unit, press ADD/DLT button on remote controller in this mode. Total elapsed “DVD Play” time (in hours) will be cleared to 0.
3. To release from Usage Screen Mode, press any operation button on remote controller or insert a cassette tape in this mode. The unit will return to normal operation mode.

4.4. EEPROM IC (IC6004), MAIN C.B.A. REPLACEMENT NOTE

After replacing EEPROM IC (IC6004) or Main C.B.A., be sure to perform the "PG SHIFTER ADJUSTMENT".

4.5. GROUNDING FOR ELECTROSTATIC BREAKDOWN

Prevention

1. Human body grounding

   Use the antistatic wrist strap to discharge the static electricity from your body.

2. Work table grounding

   Put a conductive material (sheet) or steel sheet on the area where the optical pickup is placed and ground the sheet.

Caution:

The static electricity of your clothes will not be groundedthrough the wrist strap. So take care not to let your clothestouch the optical pickup.

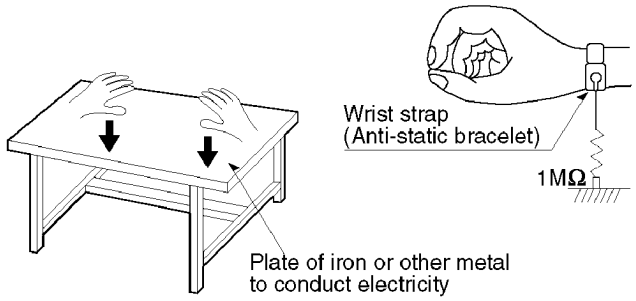


Fig. 5-1

4.6. METHOD FOR EJECTING THE DVD TRAY MANUALLY

1. Insert a Screwdriver or similar object into the Eject hole.
2. Press it gently, and then pull the Tray fully out.

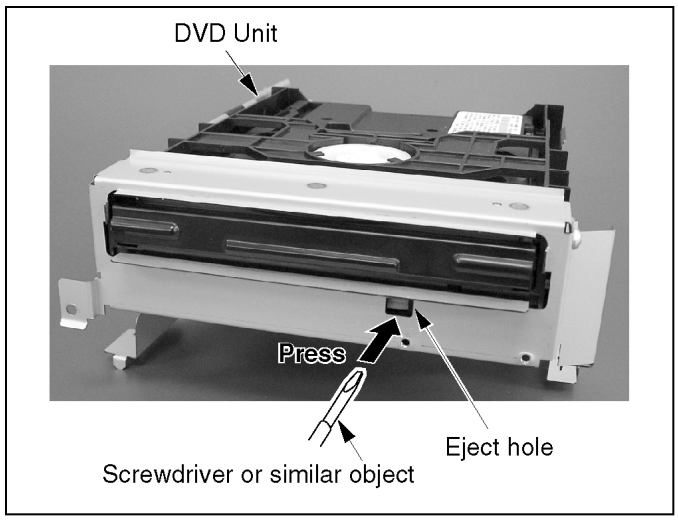


Fig. 6-1

4.7. SERVICE POSITION

Service Position	Purpose
Service Position (1)	Mechanism check Mechanical adjustment Electrical adjustment
Service Position (2)	Main C.B.A. check
Service Position (3)	DVD Main C.B.A. check

CAUTION:

HOT CIRCUIT (Primary circuit) exists on the Main C.B.A. Use extreme care to prevent accidental shock when servicing.

NOTE:

When carring out loading of the cassette tape, if light is strong, a tape may not carry out loading.

Please shade a Mechanism Unit top or weaken lighting.

4.7.1. Service Position (1)

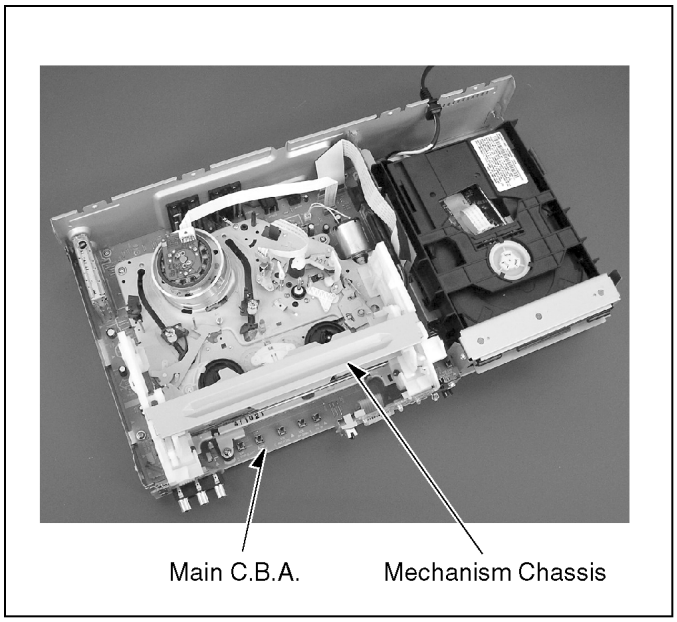


Fig. 7-1

4.7.2. Service Position (2)

Turn on the power and insert the Cassette tape.

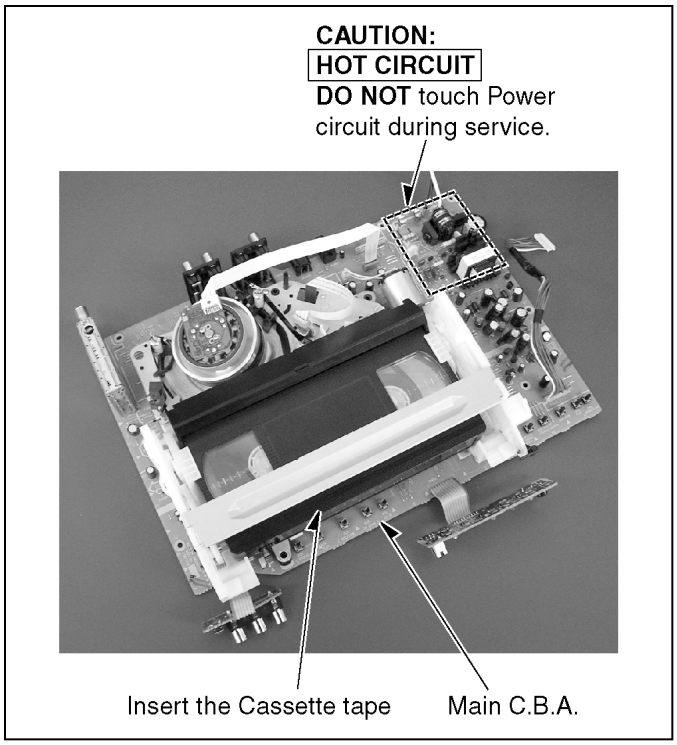


Fig. 7-2

After disconnecting the AC cord, turn over the Main C.B.A. and Mechanism Chassis together.

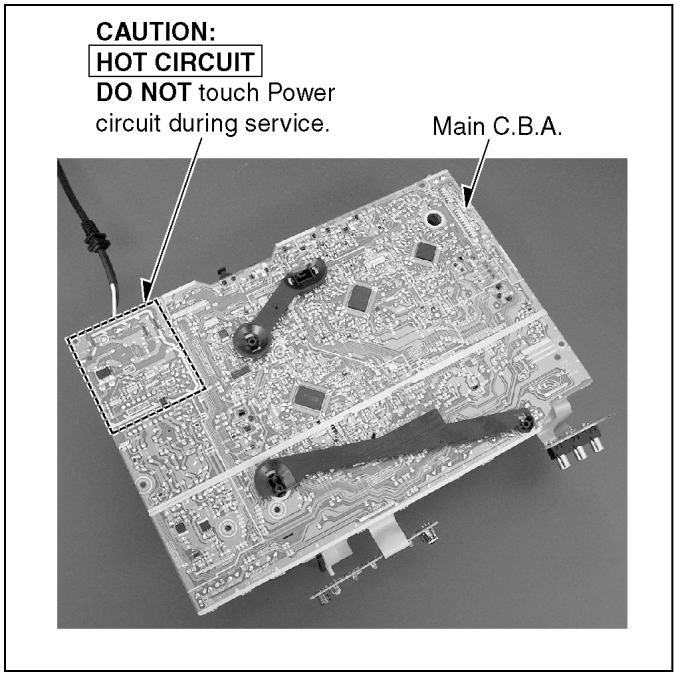


Fig. 7-3

4.7.3. Service Position (3)

In Service Position (3), the DVD Main C.B.A. without Extension Cables can be performed.

Turn on the power and playback the disc.

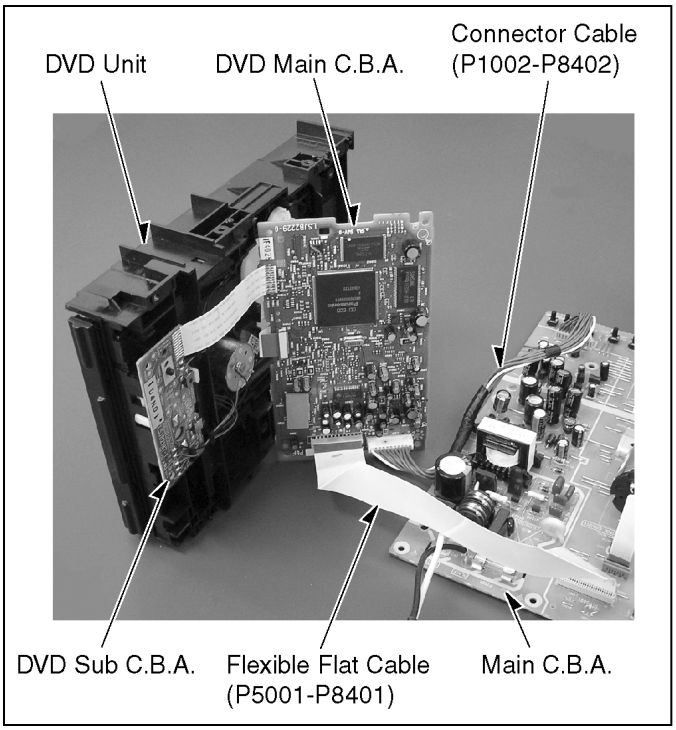


Fig. 7-4

4.8. HOT CIRCUIT

Primary circuit exists on the Main C.B.A.

This circuit is identified as "**HOT**" on the C.B.A. and in the Service Manual. Use extreme care to prevent accidental shock when servicing.

4.9. SERVICE MODE

In order to inhibit detection of the Supply & Takeup Photo Transistors, Reel Sensor, and Cylinder Lock can be inhibited. In this mode, Mechanism movement can be confirmed. When removing Cassette Up Ass´y, it can be confirmed without a cassette.

To enter Service Mode:

Press and hold FF and CH DOWN buttons on the unit together over 5 seconds in power off condition. The unit goes into Service Mode. The VCR and DVD LEDs blinks.

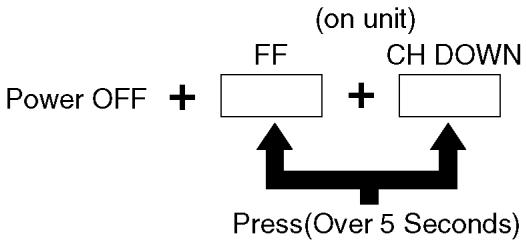


Fig. 9-1

To release from this mode, disconnect AC Plug.

4.10. MECHA MANUAL MODE

In shut off condition or in Service Mode, press the CH UP button on the unit and CH UP key on the remote together without a cassette.

In this mode, Loading or Unloading operation can be confirmed by pressing the FF or REW key on the remote.

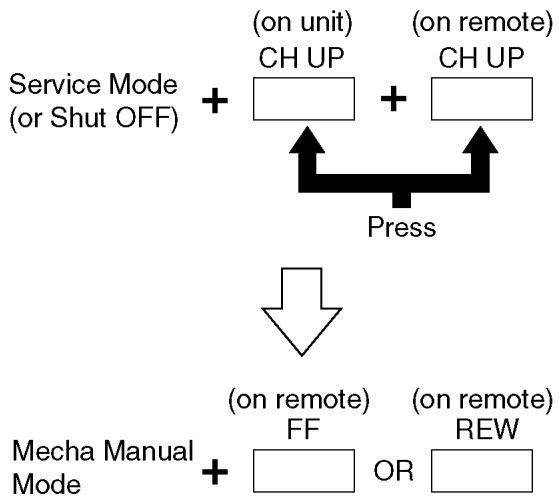


Fig. 10-1

To release from this mode, disconnect AC Plug.

Note:

When Loading with no cassette tape, push the portion (A) on Cassette Holder Unit so that the Sefety Lever clear the 2 Tabs as show in below.

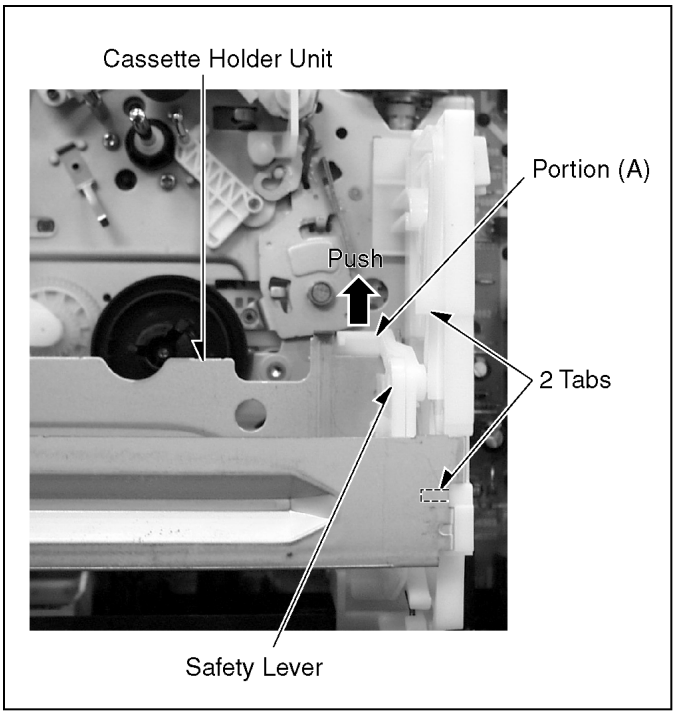


Fig. 10-2

4.11. TRACKING CENTER MODE (TRACKING FIX AT CENTER)

Insert the Cassette tape. Set the unit into Service Mode. Press CH UP button and CH DOWN button on unit together in Play back mode. “TRACKING CENTER” will be displayed on the TV monitor.

In this mode, the tracking is fixed at center. (Auto tracking and manual tracking functions are not operational.)

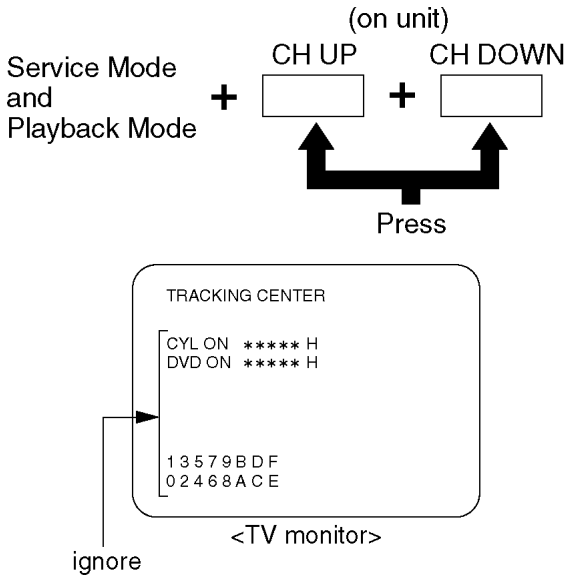


Fig. 11-1

To release from this mode, press CH UP button and CH DOWN button on unit together again.

4.12. HOW TO RESET ALL MEMORY FUNCTIONS

To reset all memory functions to factory setting (if relocating the Deck, or if initial setup needs to be redone), press and hold both **VCR PLAY** and **CH UP** buttons on the unit for more than 5 seconds in power on and **no cassette inserted** condition.

The power will shut off.

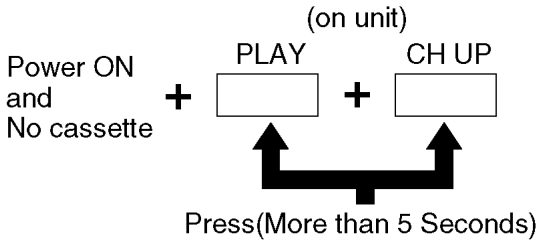


Fig. 12-1

4.13. F.F.C. CONNECTION NOTE

4.13.1. F.F.C. between the Mechanism and Main C.B.A.

Be careful with the direction of F.F.C. to Connectors as shown.

Note:

1. Insert the F.F.C. so that it is parallel to the connector.
2. After inserting the F.F.C., check that the F.F.C. does not incline.

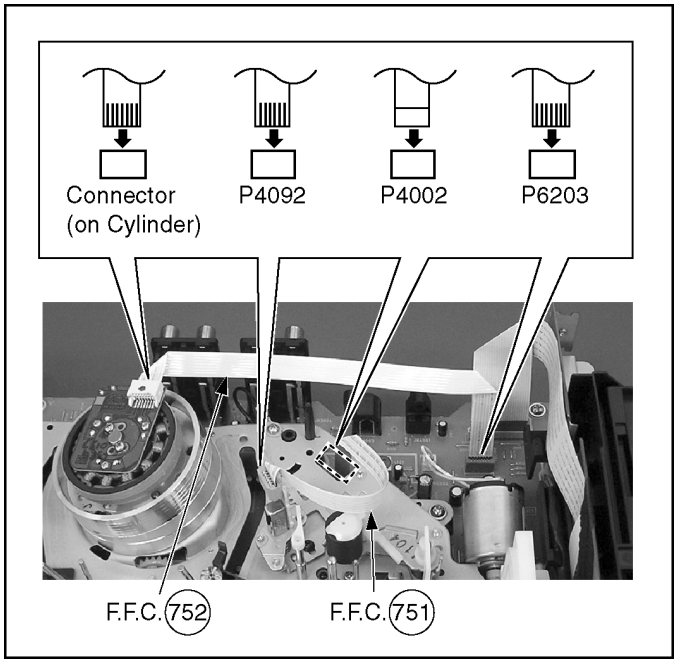


Fig. 13-1

4.13.2. F.F.C. between the DVD Unit and Main C.B.A.

Be careful with the direction of F.F.C. to Connectors as shown.

Note:

1. Insert the F.F.C. so that it is parallel to the connector.
2. After inserting the F.F.C., check that the F.F.C. does not incline.

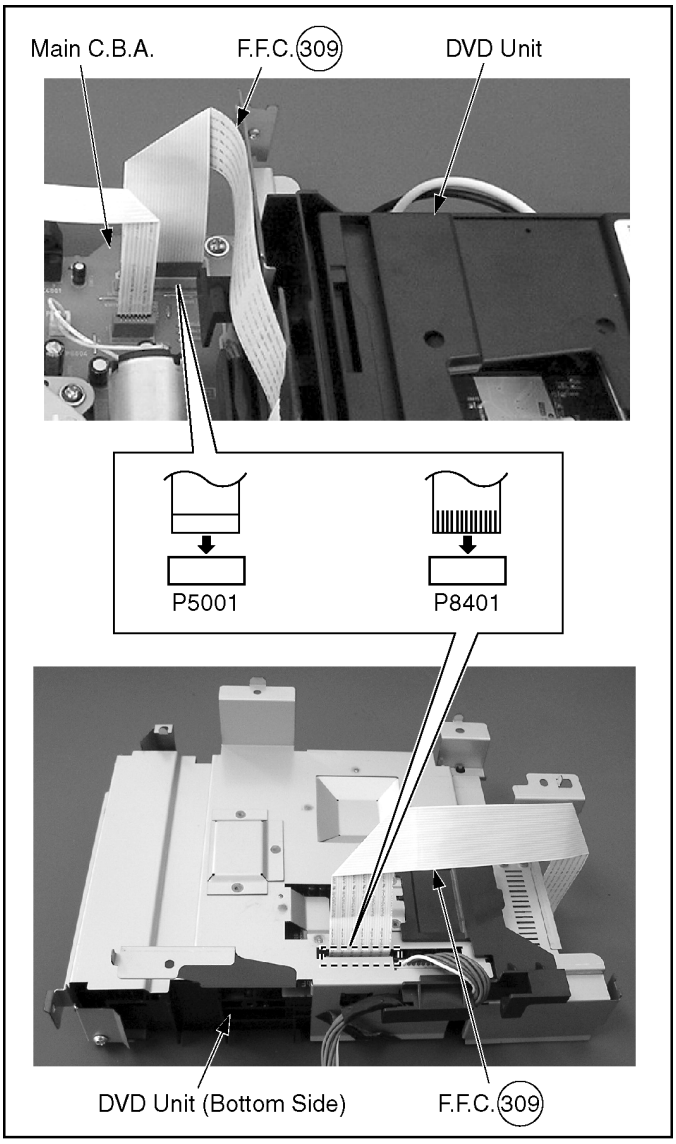


Fig. 13-2

4.14. HOW TO CONFIRM AUTO CLOCK SET FEATURE

1. Connect an RF cable from the output of one unit to the input of the test unit.
2. Select corresponding RF channels.
3. Playback a recording of P.B.S. channel including clock set data and confirm this feature.

4.15. VARIABLE VOLTAGE ISOLATION TRANSFORMER

An Isolation Transformer should always be used during the servicing of DVD VCR whose chassis is not isolated from the AC power line. Use a transformer of adequate power rating as this protects the technician from accidents resulting in personal injury from electrical shocks. It will also protect DVD VCR from being damaged by accidental shorting that may occur during servicing.

Also, when troubleshooting the above type of Power Supply Circuit, a variable isolation transformer is required in order to increase the input voltage slowly.

4.16. SPECIAL NOTE

All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the “ELECTROSTATICALLY SENSITIVE (ES) DEVICES” section of this service manual.

4.17. MODEL NO. IDENTIFICATION MARK

Use Marks shown in the chart below to distinguish the different models included in this Service Manual.

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G
Not Used	PT

Note:

Refer to Item 3 of Schematic Diagram Notes of Schematic Diagram Notes, for mark “PT.”

5 DISASSEMBLY/ASSEMBLY PROCEDURES

5.1. CABINET SECTION

5.1.1. Disassembly Flowchart

Perform disassembly procedures in the order described in the "Disassembly Flowchart" Shown below. When reassembling, use the reverse procedure.

CAUTION:

Disconnect AC plug before disassembly or assembly.

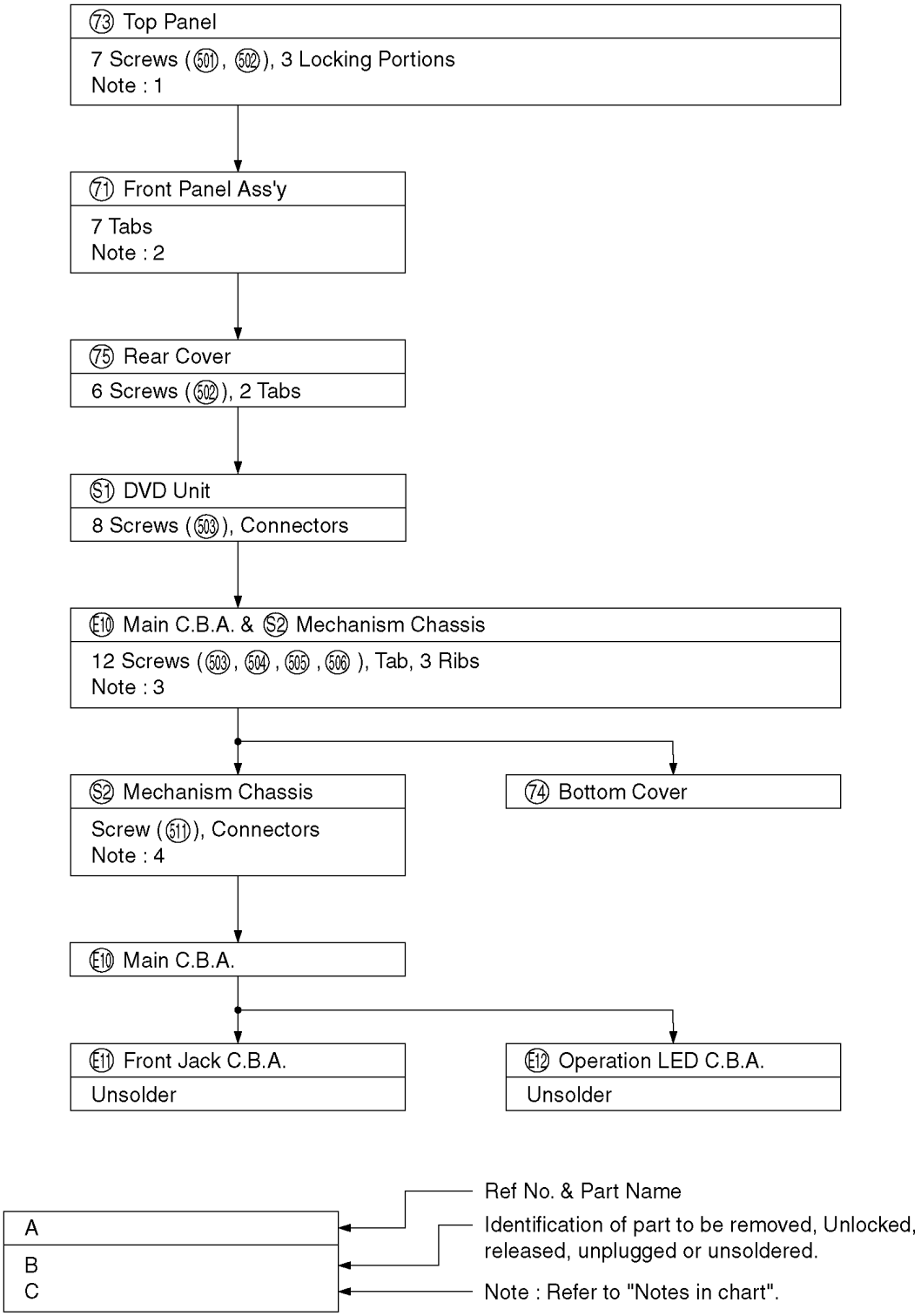


Fig. C1

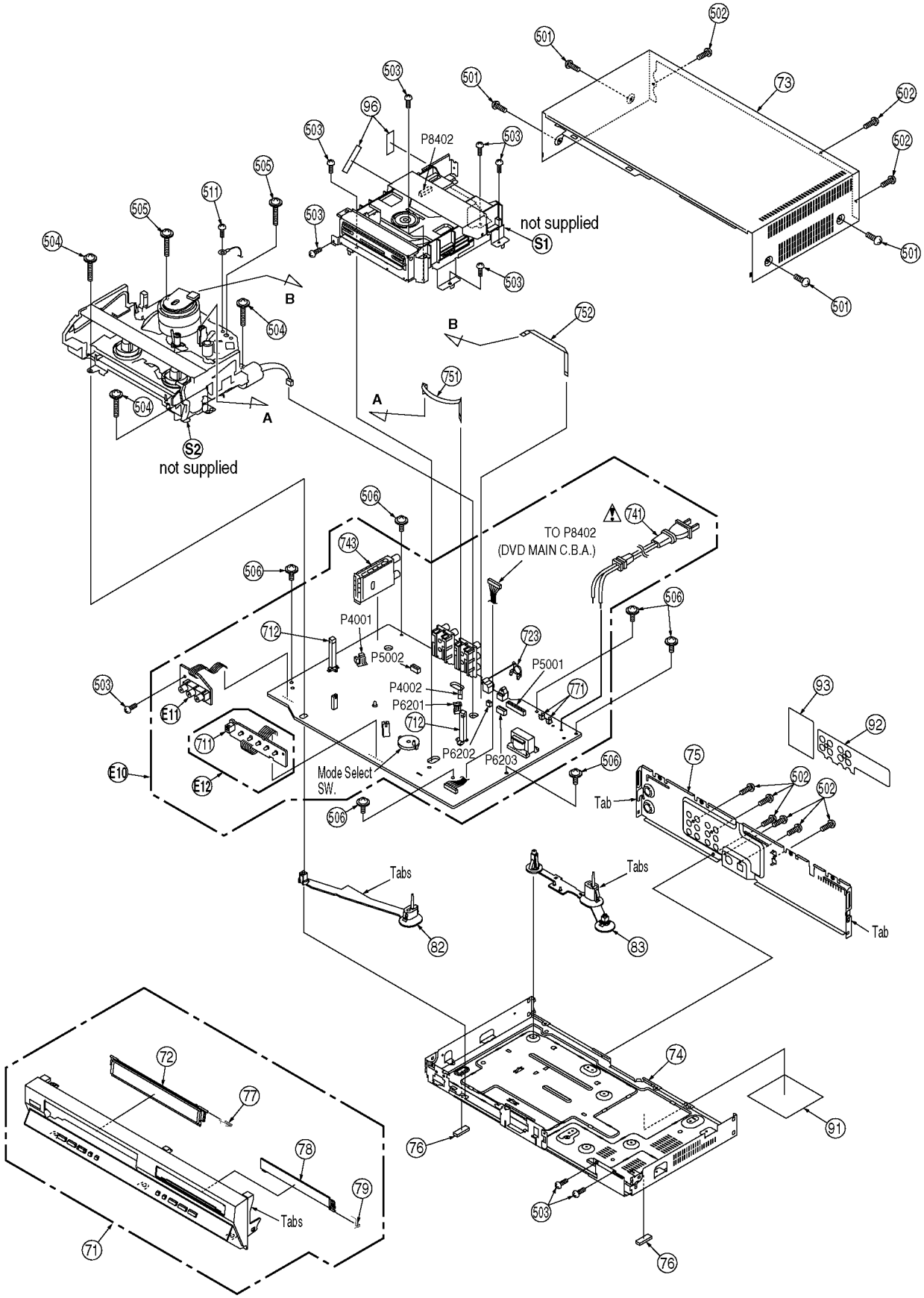

not supplied
S1
not supplied
S2
P8402
TO P8402
(DVD MAIN C.B.A.)
P4001
P5002
P4002
P6201
P6202
P6203
P5001
Mode Select
SW.
Tab
Tabs
Tabs
Tabs
Tab

Fig. C2

5.1.1.1. Notes in chart (Cabinet Section)

1. **Removal of Top Panel**
   a. Remove the 7 screws (501, 502).
   b. Raise the rear portion of Top Panel, and insert your hand in the inside and lift the position “A” to release the Top Panel from Locking Portion.

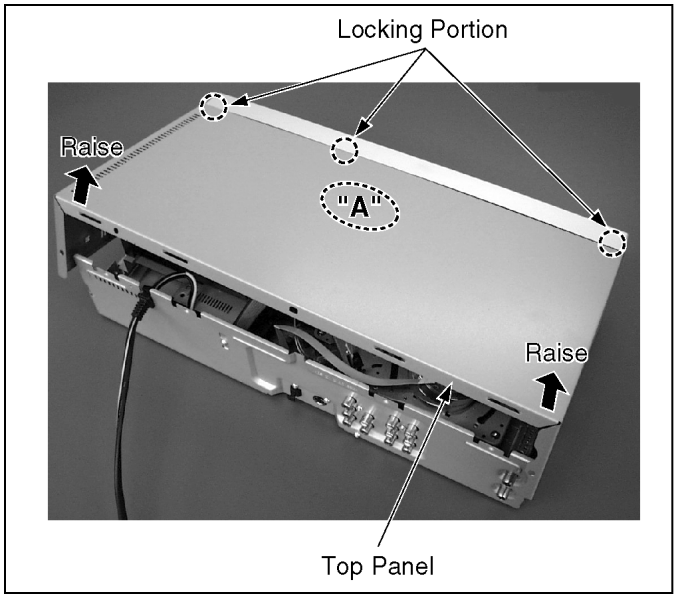


Fig. C3

Installation of Top Panel

Install the Top Panel front portion at a downward angle so that the tab on the Front Panel Ass’y fits into the hole in the Top Panel.

Then, Lover the rear portion into place and tighten 7 Screws (501, 502).

2. **Installation of Front Panel Ass’y**

CAUTION:

Opener Lever may be damaged when Front Panel Ass’y is installed, with Cassette Door-Lid of Front Panel Ass’y and Opener Lever of Cassette Up Ass’y set incorrectly.

a. When installing the Front Panel Ass’y, swing the Cassette Door-Lid all the way open until the Cassette Door tab clears the Opener Lever.
b. Make sure that all locking tabs are aligned properly. Then, press the Front Panel straight in.

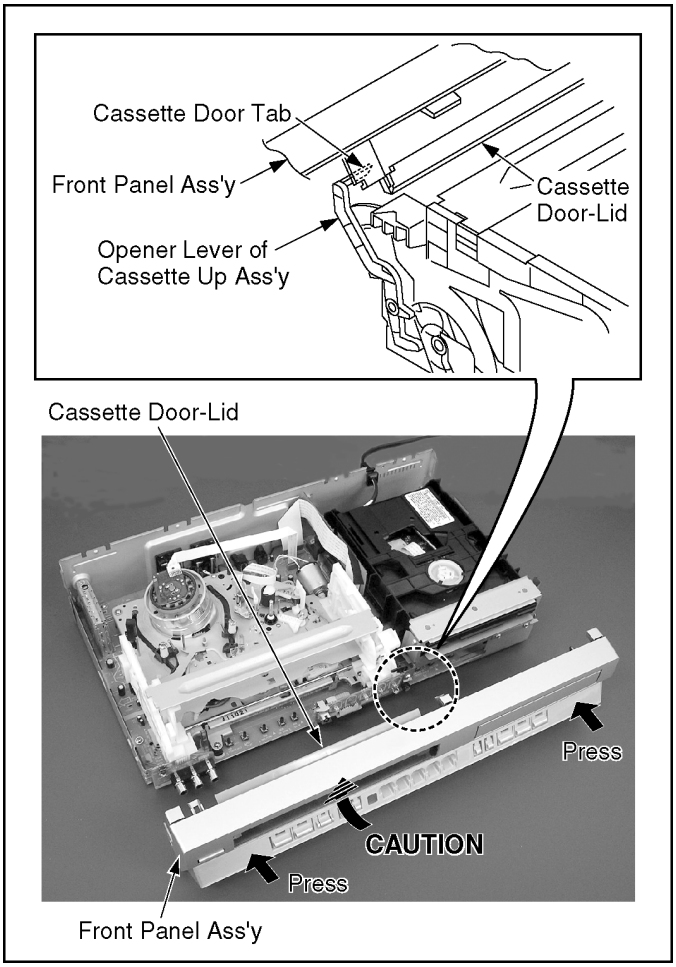


Fig. C4

3. **Removal of Front Jack C.B.A. from Bottom Cover.**
   a. Remove the screw (501).
   b. Releasing the rib, and remove the Front Jack C.B.A.

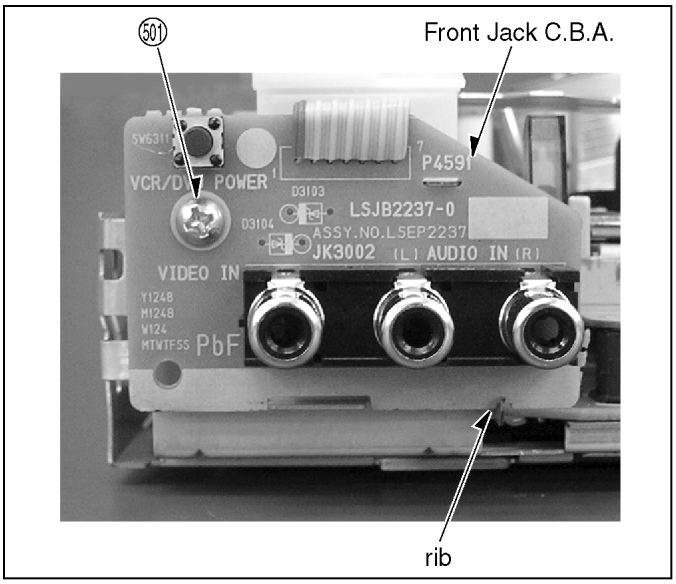


Fig. C5

Removal of Operation LED C.B.A. from Bottom Cover.

a. Releasing the tab and 2 ribs, and remove the Operation LED C.B.A.

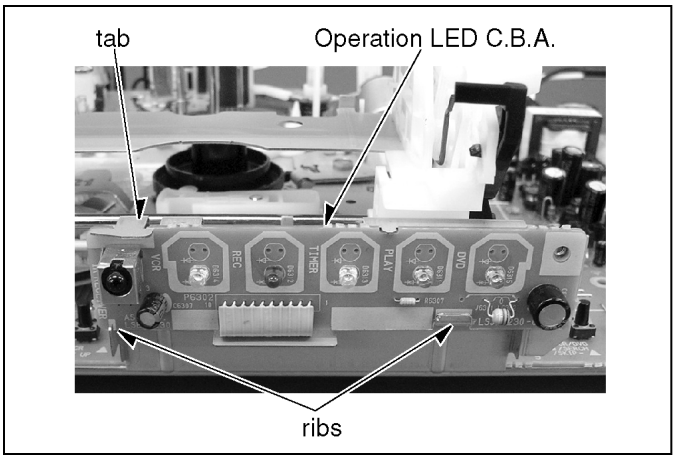


Fig. C6

4. **Installation of Mechanism Chassis onto Main C.B.A.**

a. Make sure the Mode Select SW. on the Main C.B.A. is in **EJECT** position. If not, rotate the Mode Select SW. until the alignment projection is in the **EJECT** Position.

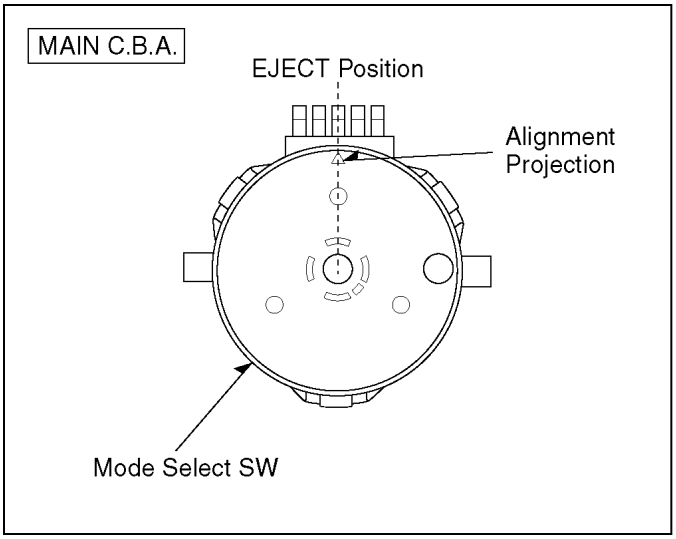


Fig. C7

b. Make sure the phase hole of the Main Cam Gear on the bottom side of Mechanism Unit is in **EJECT** position.

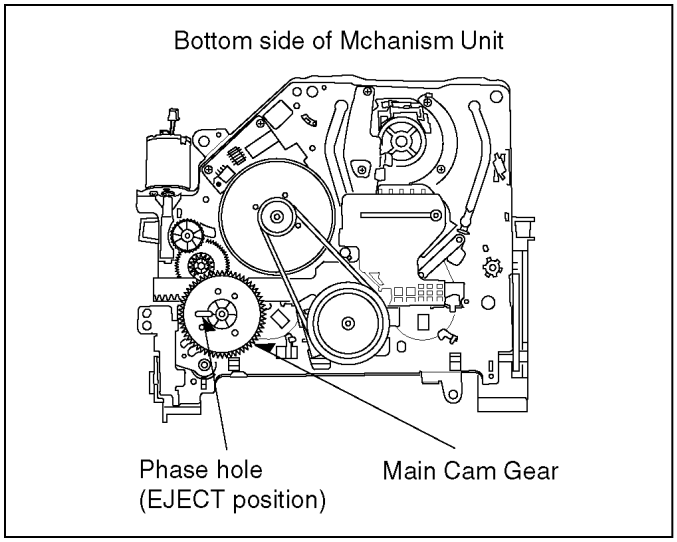


Fig. C8

c. Install the Mechanism Chassis straight onto the Main C.B.A. so that the Photo transistor Unit (712) clears the hole in the Mechanism Chassis and that 3 Connectors (P5001, P4001, P6201) are aligned and seated securely.

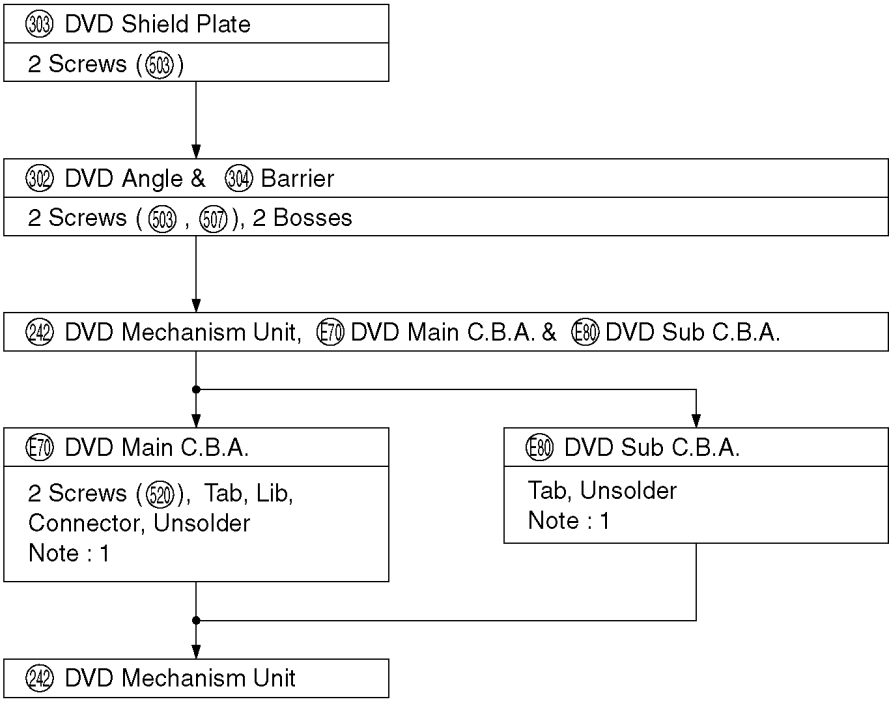
5.2. MECHANISM SECTION

Refer to the Service Manual for R4-Mechanism Chassis for PV-Model (Order No. MKE0401000C1).

5.3. DVD SECTION

5.3.1. Disassembly Flowchart

Perform disassembly procedures in the order described in the "Disassembly Flowchart" Shown below. When reassembling, use the reverse procedure.


303 DVD Shield Plate
2 Screws (503)
302 DVD Angle & 304 Barrier
2 Screws (503 , 507), 2 Bosses
242 DVD Mechanism Unit, E70 DVD Main C.B.A. & E80 DVD Sub C.B.A.
E70 DVD Main C.B.A.
2 Screws (520), Tab, Lib,
Connector, Unsolder
Note : 1
E80 DVD Sub C.B.A.
Tab, Unsolder
Note : 1
242 DVD Mechanism Unit

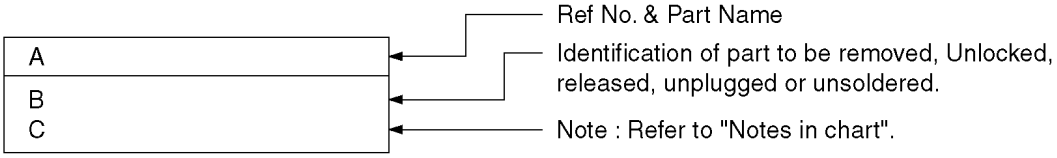

A
B
C
Ref No. & Part Name
Identification of part to be removed, Unlocked, released, unplugged or unsoldered.
Note : Refer to "Notes in chart".

Fig. D1

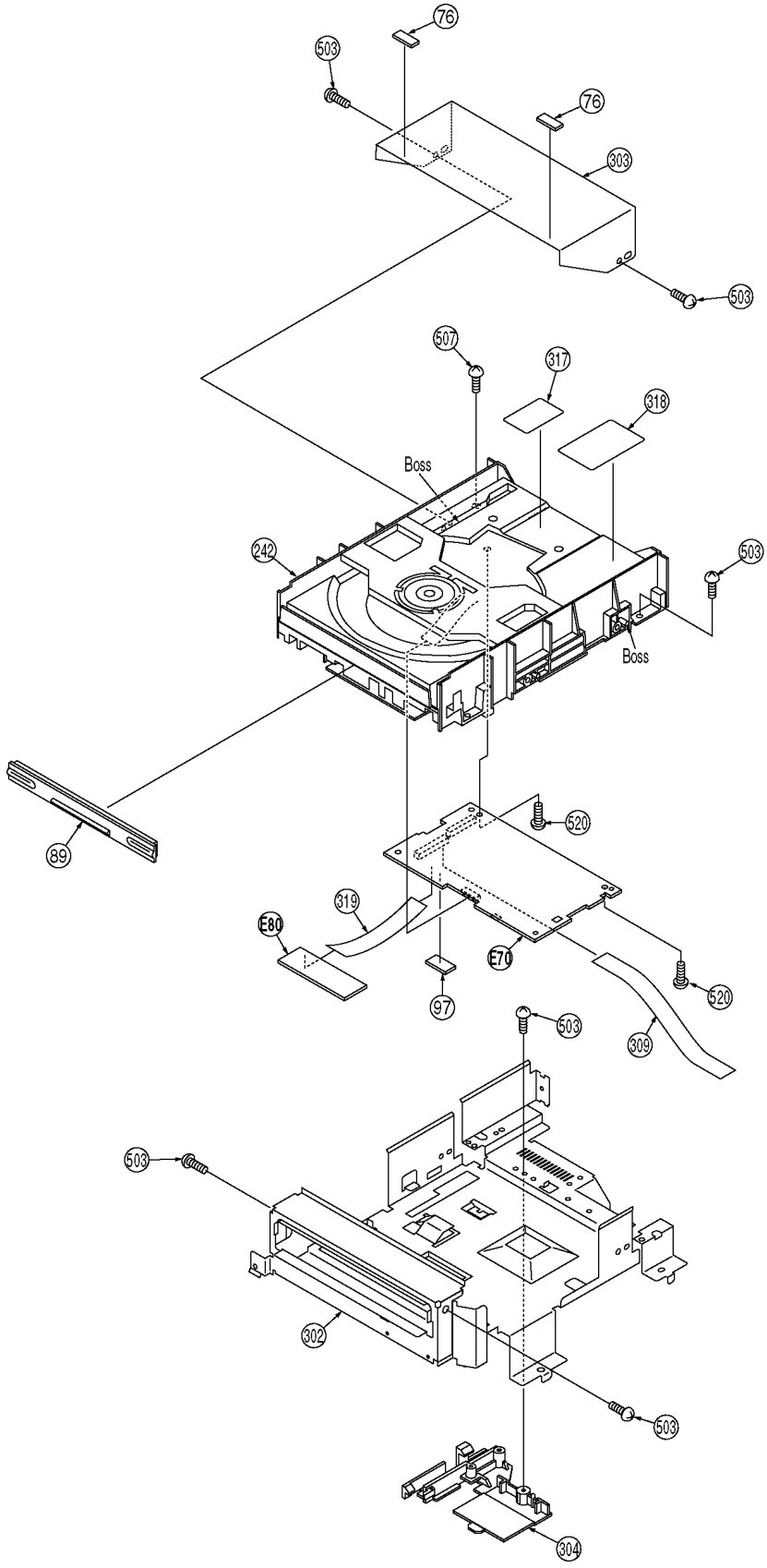

76
503
76
303
503
507
317
318
Boss
242
503
Boss
89
520
319
E80
E70
97
520
309
503
503
302
503
304

Fig. D2

5.3.1.1. Notes in chart (DVD Section)

1. **Removal of DVD Sub C.B.A.**
   a. Remove solder portions "a, b, c, d, e, f, g, h, i, j" on the DVD Sub C.B.A.
   b. Remove the DVD Sub C.B.A. while releasing the Locking Tab.

Installation of DVD Main C.B.A. and DVD Sub C.B.A.

a. Confirm that the Lever A is positioned as shown, and install the DVD Sub C.B.A. with the Locking Tab and 2 bosses.
b. Install the DVD Main C.B.A. with the Locking Tab and the rib.
c. Pass the leads through the slots A and B.
d. Solder portions "a, b, c, d, e, f, g, h, i, j" on the C.B.A.

Note:

Solder portions "h" and “i” while pushing down the DVD Sub C.B.A. securely.

e. Connect the F.F.C.s to Connectors P8901 on the DVD Main C.B.A.
f. Tighten the 2 Screws (520).

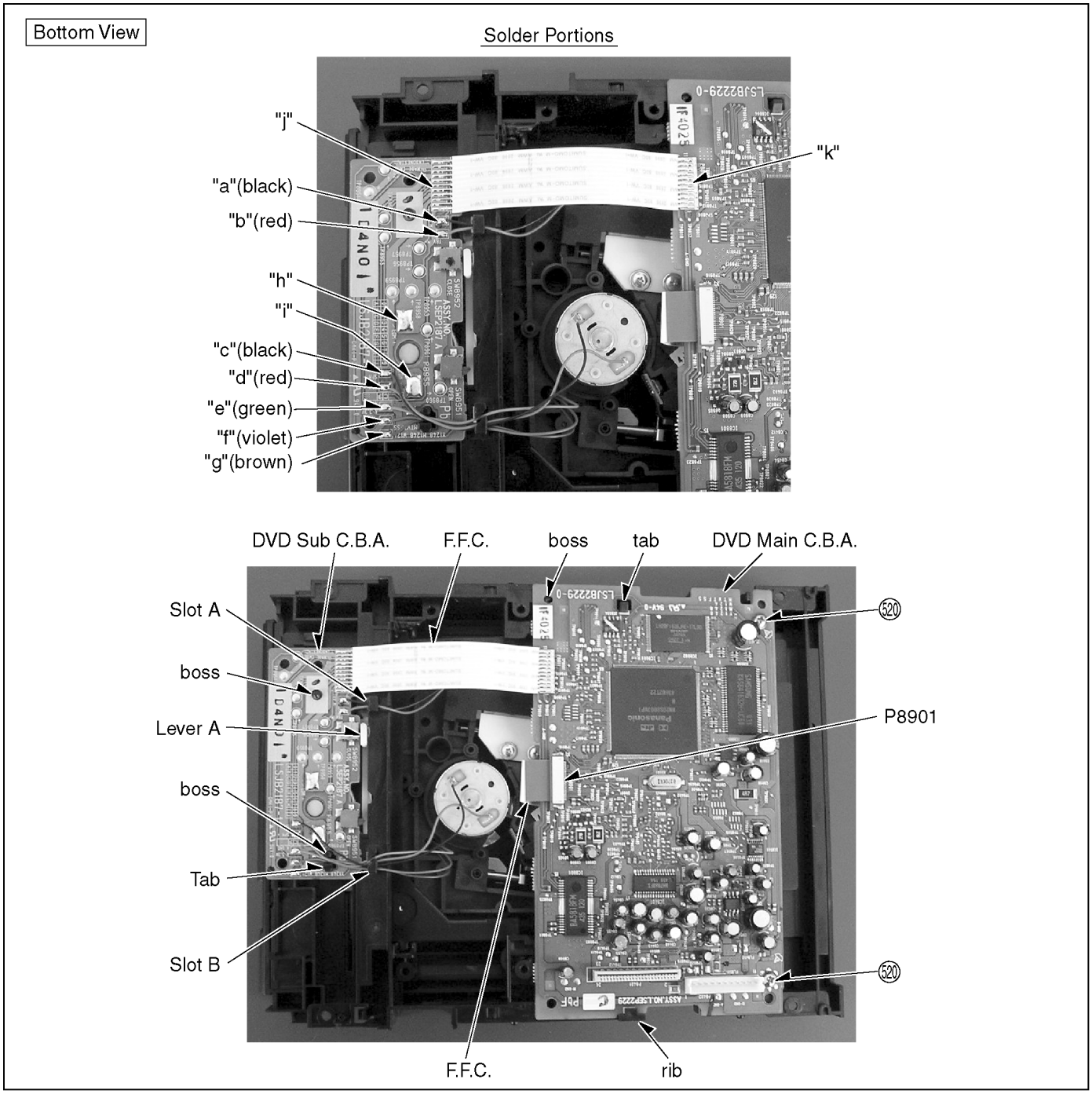


Fig. D3

6 ADJUSTMENT PROCEDURES

6.1. MECHANICAL ADJUSTMENT

Refer to the Service Manual for R4-Mechanism Chassis for PV-Model (Order No. MKE0401000C1).

6.2. ELECTRICAL ADJUSTMENT

6.2.1. TEST EQUIPMENT

To do all of these electrical adjustments, the following equipment is required.

1. Dual-Trace Oscilloscope
   Voltage Range: 0.001 V to 50 V/Div.
   Frequency Range: DC to 50 MHz
   Probes: 10:1, 1:1
2. Isolation Transformer (Variable)
3. VHS Alignment Tape (VFMS0003H6)
4. TV monitor

6.2.2. HOW TO READ THE ADJUSTMENT PROCEDURES

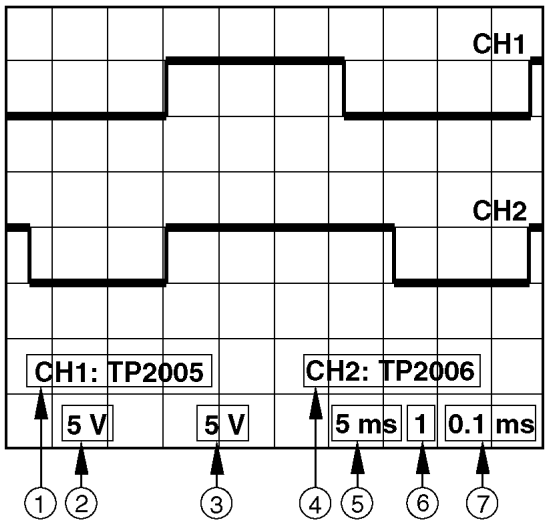


Fig. E1

6.2.3. EVR (Electronic Variable Register) ADJUSTMENT WITH THE REMOTE CONTROL

This unit has electronic technology using I^2C Bus concept.

The PG SHIFTER ADJUSTMENT is adjusted by using "On Screen Displays" and the remote control instead of adjusting mechanical controls (VR).

6.2.4. PG SHIFTER ADJUSTMENT

Purpose:	Determine the Video Head Switching Point during Playback.
Symptom of Misadjustment:	May cause Head Switching Noise and/or Vertical Jitter.
Test Point :	**TP3001 (Main C.B.A.), TP6205 (Main C.B.A.)**
Specification:	**T = 6 H ± 0.5 H (0.38 ms ± 0.03 ms)**
Mode :	SP Playback
Equipment :	Oscilloscope, VHS Alignment Tape (VFMS0003H6), TV monitor

1. Insert the VHS Alignment Tape. Enter service mode by pressing and holding FF and CH DOWN buttons on VCR together for more than 5 seconds.
2. Play back SP mode. Then, press 100 button on the remote to enter EVR PG SHIFTER ADJUSTMENT mode. PG ADJUSTMENT screen will appear on the TV Monitor.

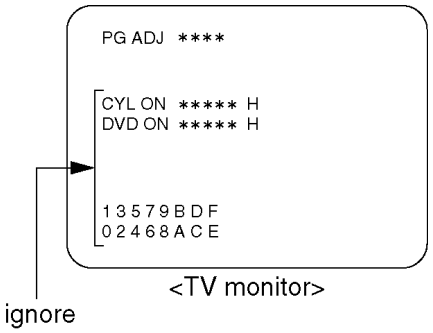


Fig. E2

3. Connect the channel-1 scope probe to TP3001 and the channel-2 scope probe to TP6205. Used TP6205 as a trigger
4. Adjust value so that the trailing edge of the head switching pulse is placed 6 H ± 0.5 H (0.38 ms ± 0.03 ms) before the start of the vertical sync pulse by pressing CH UP and CH DOWN buttons on the remote.

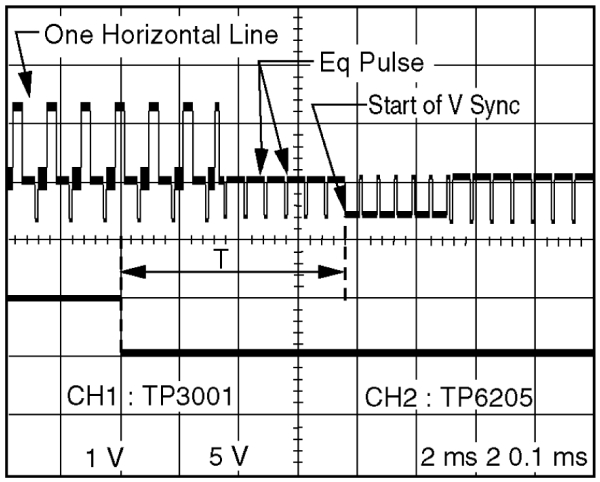


Fig. E3

5. After adjustment is completed, press REC button on the remote. Then " COMP " will appear on the TV monitor and adjusted value will be written to Memory IC (IC6004).

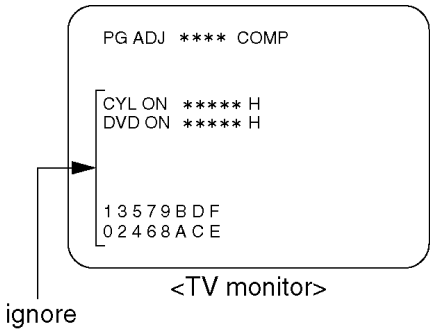
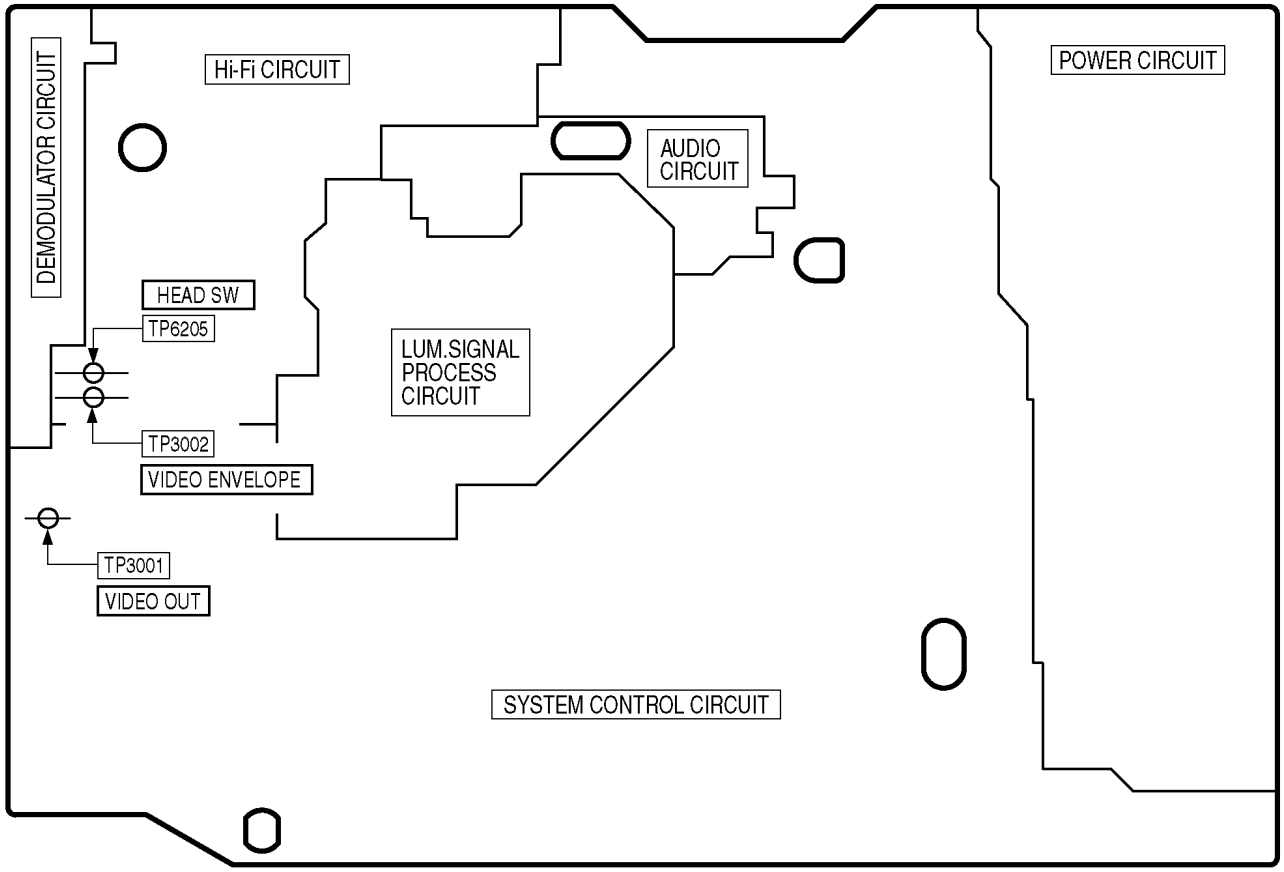


Fig.E4

6. Press STOP button on the remote to release from EVR PG SHIFTER ADJUSTMENT MODE.

6.3. TEST POINTS AND CONTROL LOCATION

MAIN C.B.A. (Component Side)



Test point information

□→ : Test point with a jumper wire across a hole in C.B.A.

7 SCHEMATIC DIAGRAMS

7.1. SCHEMATIC DIAGRAM & CIRCUIT BOARD LAYOUT NOTES

1. **Important safety notice**
   Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components. Use only the specified parts.

2. Do not use the part number shown on this drawing for ordering.
   The correct part number and part value is shown in the parts list, and may be slightly different or amended since this drawing was prepared.

3. Use only original replacement parts:
   To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list section of the service manual.

4. Parts different in shape or size may be used.
   However, only interchangeable parts will be supplied as service replacement parts.

5. Test point information
   ▭→: Test point with a jumper wire across a hole in P.C.B.
   ○ : Test point with no test pin.
   ● :Test point with a component lead on the foil side.

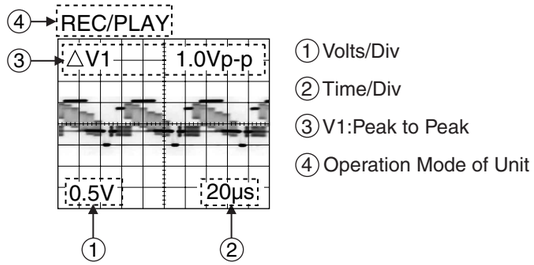
3. Parts marked "PT" are not used in any models included in this service model.

Example: C6011 100P PT C6014 PT R6097 PT

4. Jumper wires are used for WA10, WA5 etc and these are not supplied as replacement parts.

Signal Waveform Note

How to read Signal Waveform



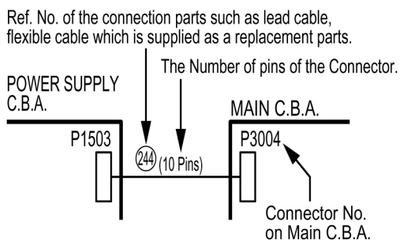
Schematic Diagram Notes

1. Indication for Zener Voltage of Zener Diodes
   The Zener Voltage of Zener Diodes are indicated as such on Schematic Diagrams.

   Example:
   (6.2V).....Zener Voltage

2. How to identify Connectors
   Each connector is labeled with a Connector No. and Pin No. Indicating what it is connected to,
   in other words, its counter part.
   Use the interconnection schematic diagram to find the connection between associated connectors.

   Example:
   The connections between C.B.A.s are shown below.


Ref. No. of the connection parts such as lead cable, flexible cable which is supplied as a replacement parts.
The Number of pins of the Connector.
POWER SUPPLY C.B.A.
MAIN C.B.A.
P1503
(24) (10 Pins)
P3004
Connector No. on Main C.B.A.

Voltage Chart Note

Voltage Measurement
a. Color bar signal in SP mode.
b. ---: Unmeasurable or not necessary to measure.

Circuit Board Layout Note

Circuit Board Layout shows components installed for various models.
For proper parts content for the model you are servicing, please refer to the schematic diagram and parts list.

NOTE:
Circuit Board Layout includes components which are not used.

Model No. Identification Mark

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G
Not Used	PT

Note : Refer to item 3 of Schematic Diagram Notes for mark "PT".

7.2. MAIN SCHEMATIC DIAGRAMS

MAIN I (SYSTEM CONTROL / SERVO) SCHEMATIC DIAGRAM

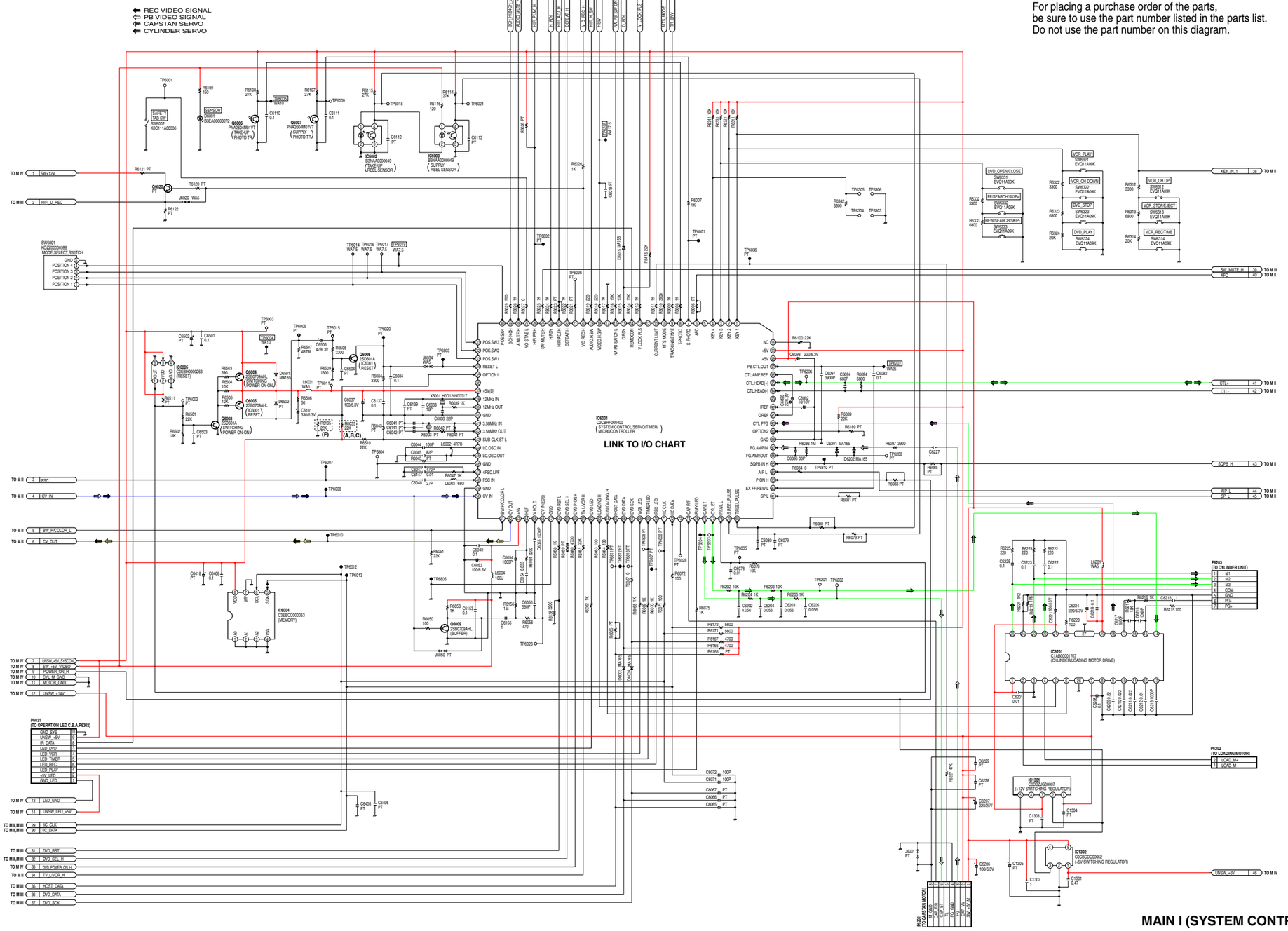
NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

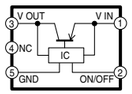
NOTE:
For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

COMPARISON CHART OF MODELS & MARKS

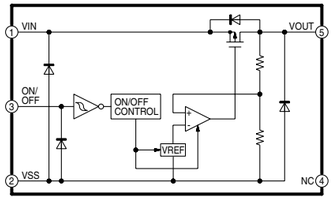
MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G
Not Used	PT



IC1301 IC-DETAIL BLOCK DIAGRAM



IC1302 IC-DETAIL BLOCK DIAGRAM



LSJB2216
MAIN I (SYSTEM CONTROL / SERVO) SCHEMATIC DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

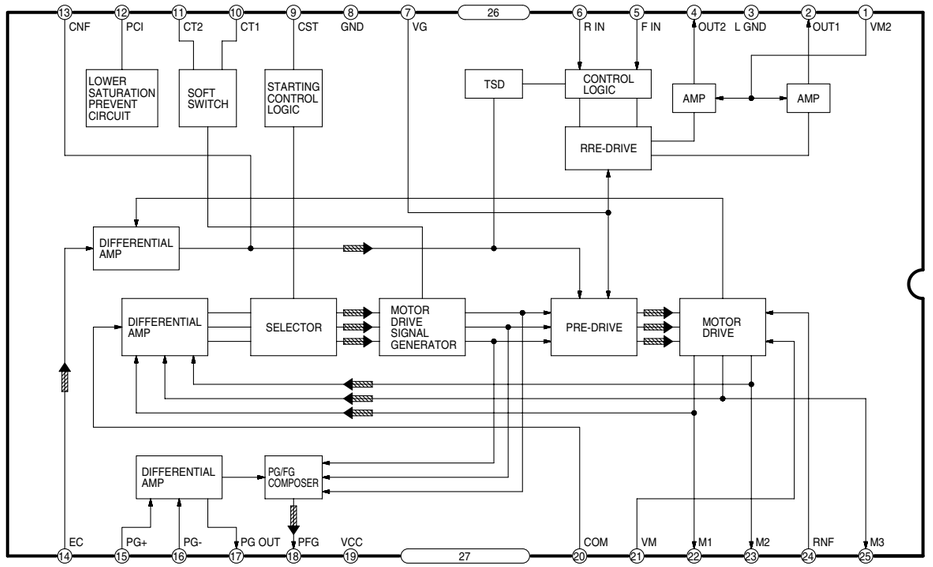
I/O CHART OF IC6001

Pin No.	Signal Name	I/O	Description
1	KEY 1	I	Input terminal for the KEY OPERATION DATA 1.
2	KEY 2	I	Input terminal for the KEY OPERATION DATA 2.
3	KEY 3	I	Input terminal for the KEY OPERATION DATA 3.
4	KEY 4	I	Input terminal for the KEY OPERATION DATA 4.
5	NC	-	Not used.
6	AFC	I	Input terminal for S-CURVE of Tuner AFC at channel selecting.
7	S PHOTO	I	Input terminal for the Tape End sensor detection.
8	T PHOTO	I	Input terminal for the Tape Beginning sensor detection.
9	TRACKING ENV.	I	Input terminal for the VIDEO ENVELOPE signal.
10	MTS MODE	I	Input terminal for the MTS MODE detection.
11	CURRENT LIMIT	O	Control terminal for the CAPSTAN CURRENT LIMIT.
12	NC	-	Not used.
13	V LOCK PLS	O	Output terminal for the ARTIFICIAL V-SYNC.
14	REMOCON	I	Input terminal for the REMOTE CONTROLLER OPERATION DATA.
15	D RDY	I	DVD UNIT READY signal for serial communication with DVD.
16	NA PB SW ON L	O	Recording control signal for the Linear Audio.
17	NC	-	Not used.
18	VIDEO H.SW	O	Output terminal for the VIDEO HEAD SWITCHING signal.
19	AUDIO H.SW	O	Output terminal for the HiFi AUDIO HEAD SWITCHING signal.
20	V D REC H	O	VIDEO DELAY REC: "High"
21	NC	-	Not used.
22	DEFEAT H	O	Output terminal for muting at channel selecting.
23	HIFI ADJ H	O	During HIFI VCO adjustment: "High"
24	H RDY	O	HOST READY signal for serial communication with DVD.
25	SW MUTE H	O	Output terminal for switching MUTE signal.
26	HIFI PB H	I	HIFI PLAYBACK:"High" NORMAL PLAYBACK:"Low"
27	NO S TAB L	I	Input terminal for the SAFETY TAB detection.
28	A MUTE H	O	AUDIO MUTING: "High"
29	3CH Hiz/4CH L	O	CH3: "Hiz" CH4: "Low"
30	POS. SW4	I	Input terminal for the MODE SELECT SW POSITION 4.
31	POS. SW3	I	Input terminal for the MODE SELECT SW POSITION 3.
32	POS. SW2	I	Input terminal for the MODE SELECT SW POSITION 2.
33	POS. SW1	I	Input terminal for the MODE SELECT SW POSITION 1.
34	RESET L	I	Input terminal for the RESET: "Low".
35	OPTION 1	I	Option terminal 1
36	NC	-	Not used.
37	+5V (D)	-	VCC (5V) for Digital port.
38	12MHz IN	I	Main clock (12MHz) OSC input terminal.
39	12MHz OUT	O	Main clock (12MHz) OSC output terminal.
40	GND (OSC)	-	Digital GND for OSC circuit.
41	3.58MHz IN	I	Not used.
42	3.58MHz OUT	O	Not used.
43	SUB CLK ST L	I	+5V fix.
44	LC OSC IN	I	Input terminal of the LC Oscillation (For OSD dot clock).
45	LC OSC OUT	O	Output terminal of the LC Oscillation (For OSD dot clock).
46	NUB (GND)	-	Connected to the GND.
47	4FSC LPF	I	OSC Filter connection terminal for Internal sync generator.
48	FSC IN	I	Sub carrier (FSC) input terminal for sync generator.
49	GND (OSD)	-	GND terminal for OSD circuit.
50	CV IN	I	Input terminal for COMPOSITE VIDEO signal.

Pin No.	Signal Name	I/O	Description
51	BW H/COLOR L	I	BW: "High" COLOR: "Low"
52	CV OUT	O	Output terminal for COMPOSITE VIDEO signal.
53	+5V (OSD)	-	Power supply terminal for OSD.
54	HLF	I	LPF connection terminal for slicer.
55	V HOLD	I	Capacitor connection terminal of the Reference voltage generator circuit for the slicer.
56	CV IN (EDS)	I	COMPOSITE VIDEO signal input terminal for the slicer.
57	NUA (GND)	-	Connected to the GND.
58	DVD RST L	O	DVD reset signal.
59	DVD SEL H	O	Output terminal for DVD/VCR select signal.
60	DVD POWER ON H	O	DVD POWER ON: "High"
61	TV L/VCR H	O	TV: "Low" VCR: "High"
62	DVD LED	O	Output terminal for the DVD LED drive signal.
63	LOADING H	O	LOADING MOTOR control terminal.
64	UNLOADING H	O	LOADING MOTOR control terminal.
65	HOST DATA	O	SERIAL DATA output for DVD.
66	DVD DATA	I	SERIAL DATA input for DVD.
67	DVD SCK	I	SERIAL CLOCK input for DVD.
68	VCR LED	O	Output terminal for the VCR LED drive signal.
69	TIMER LED	O	Output terminal for the TIMER LED drive signal.
70	REC LED	O	Output terminal for the REC LED drive signal.
71	IIC CLK	O	Serial communication terminal (IIC CLOCK) for VIDEO IC/ FM AUDIO IC/EEPROM/TUNER.
72	IIC DATA	I/O	Serial communication terminal (IIC DATA) for VIDEO IC/ FM AUDIO IC/EEPROM/TUNER.
73	NC	-	Not used.
74	CAP R/F	O	The rotation direction control terminal of the CAPSTAN driver.
75	PLAY LED	O	Output terminal for the PLAY LED drive signal.
76	CAP ET	O	CAPSTAN MOTOR control terminal.
77	CYL ET	O	CYLINDER MOTOR control terminal.
78	P FAIL L	I	Input terminal for the POWER FAILAR detection.
79	S REEL PULSE	I	Input terminal for the SUPPLY REEL PULSE.
80	T REEL PULSE	I	Input terminal for the TAKE-UP REEL PULSE.
81	SP L	O	REC/PLAY MODE: SP = "Low"
82	EX FF/REW L	O	Control signal filter select terminal in FF/REW mode.
83	P ON H	O	ON/OFF control terminal for the VCR POWER.
84	AIP L	O	Simplified AI PLAYBACK ON/OFF control.
85	SQPB IN H	I	Input terminal for the S-VHS PLAYBACK detection.
86	FG AMP OUT	O	Output terminal for the CAPSTAN FG AMP signal.
87	FG AMP IN	I	Input terminal for the CAPSTAN FG AMP signal.
88	GND (A)	-	GND for Analogue circuit.
89	OPTION 2	I	Option terminal 2
90	CYL PFG	I	Input terminal for the CYLINDER PG/FG.
91	OREF	O	1/2 VDD reference voltage output terminal for the Analogue AMP.
92	IREF	I	1/2 VDD reference voltage input terminal for the Analogue AMP.
93	NC	-	Not used.
94	CTL HAED (-)	I/O	terminal for the CONTROL HEAD (-).
95	CTL HAED (+)	I/O	terminal for the CONTROL HEAD (+).
96	CTL AMP REF	I	Capacitor connection terminal for reference of the CONTROL AMP.
97	PB CTL OUT	O	Output terminal for the CONTROL AMP.
98	+5V (A)	-	Power supply terminal for Analogue AMP.
99	+5V (AD)	-	Reference power supply terminal.
100	NC	-	Not used.

IC6201
CYLINDER/LOADING MOTOR DRIVE IC-DETAIL BLOCK DIAGRAM

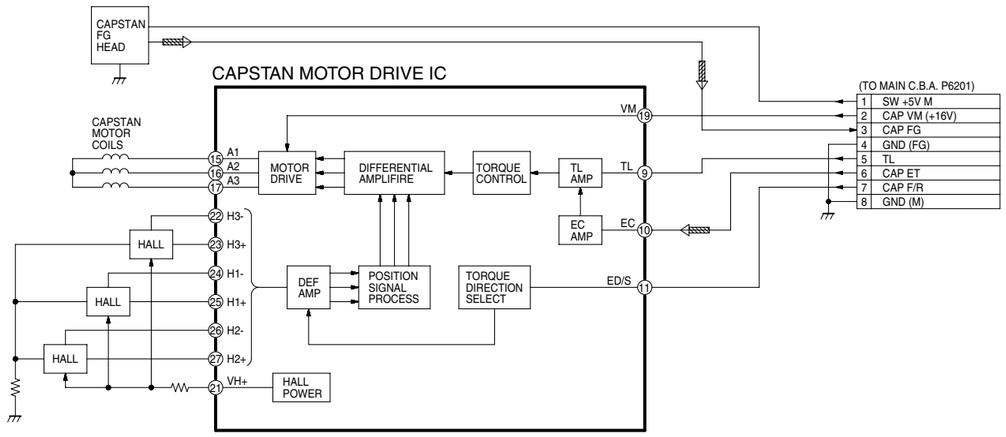
CYLINDER SERVO



CAPSTAN MOTOR ASS'Y BLOCK DIAGRAM

NOTE:CAPSTAN MOTOR ASS'Y IS SUPPLIED AS A UNIT ONLY.

CAPSTAN SERVO



I/O CHART OF IC6001
IC6201 IC-DETAIL BLOCK DIAGRAM
CAPSTAN MOTOR ASS'Y BLOCK DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

MAIN II (VIDEO SIGNAL PROCESS / AUDIO) SCHEMATIC DIAGRAM

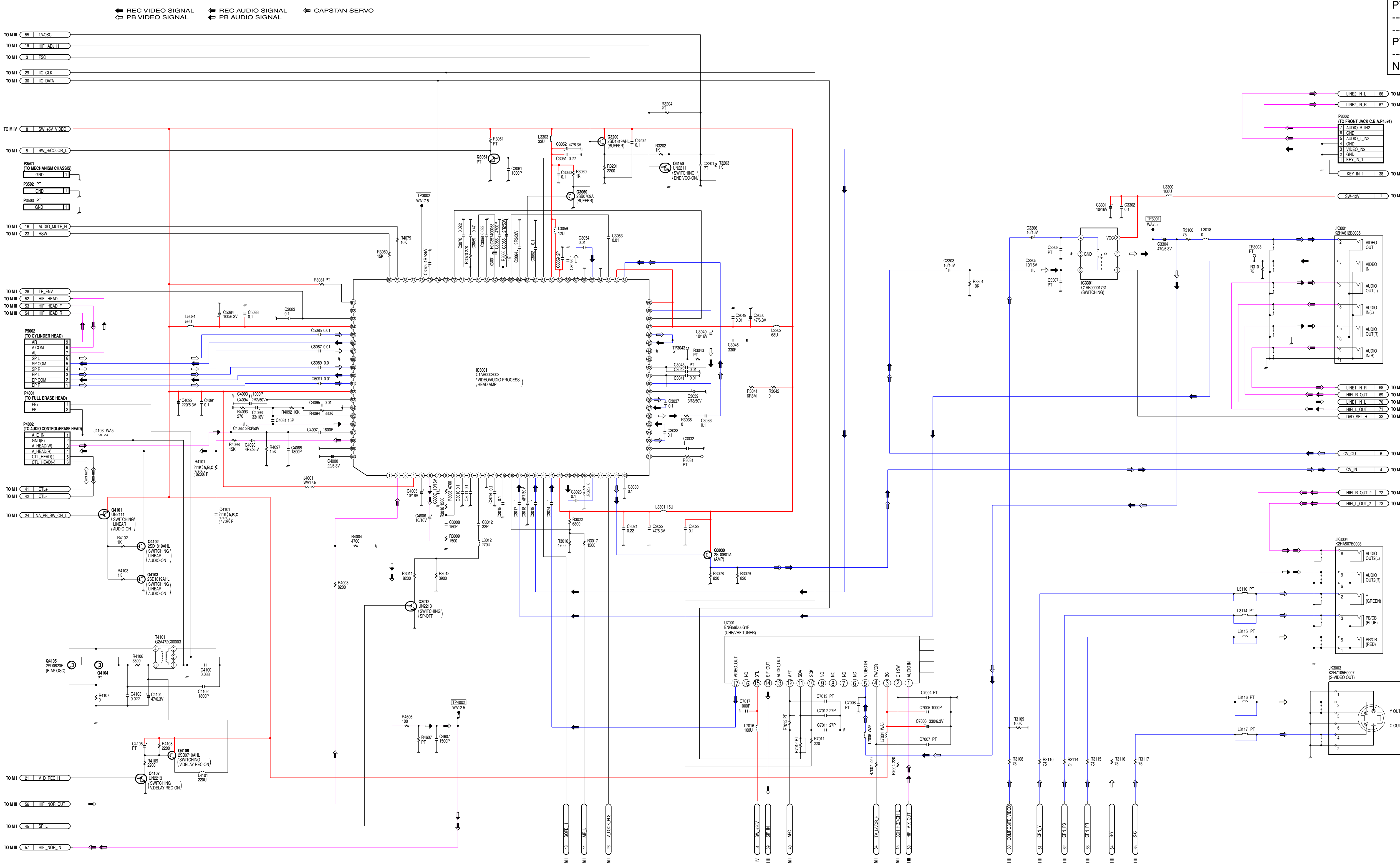
NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
---------------	D
---------------	E
PV-D4745S-K	F
---------------	G
Not Used	PT

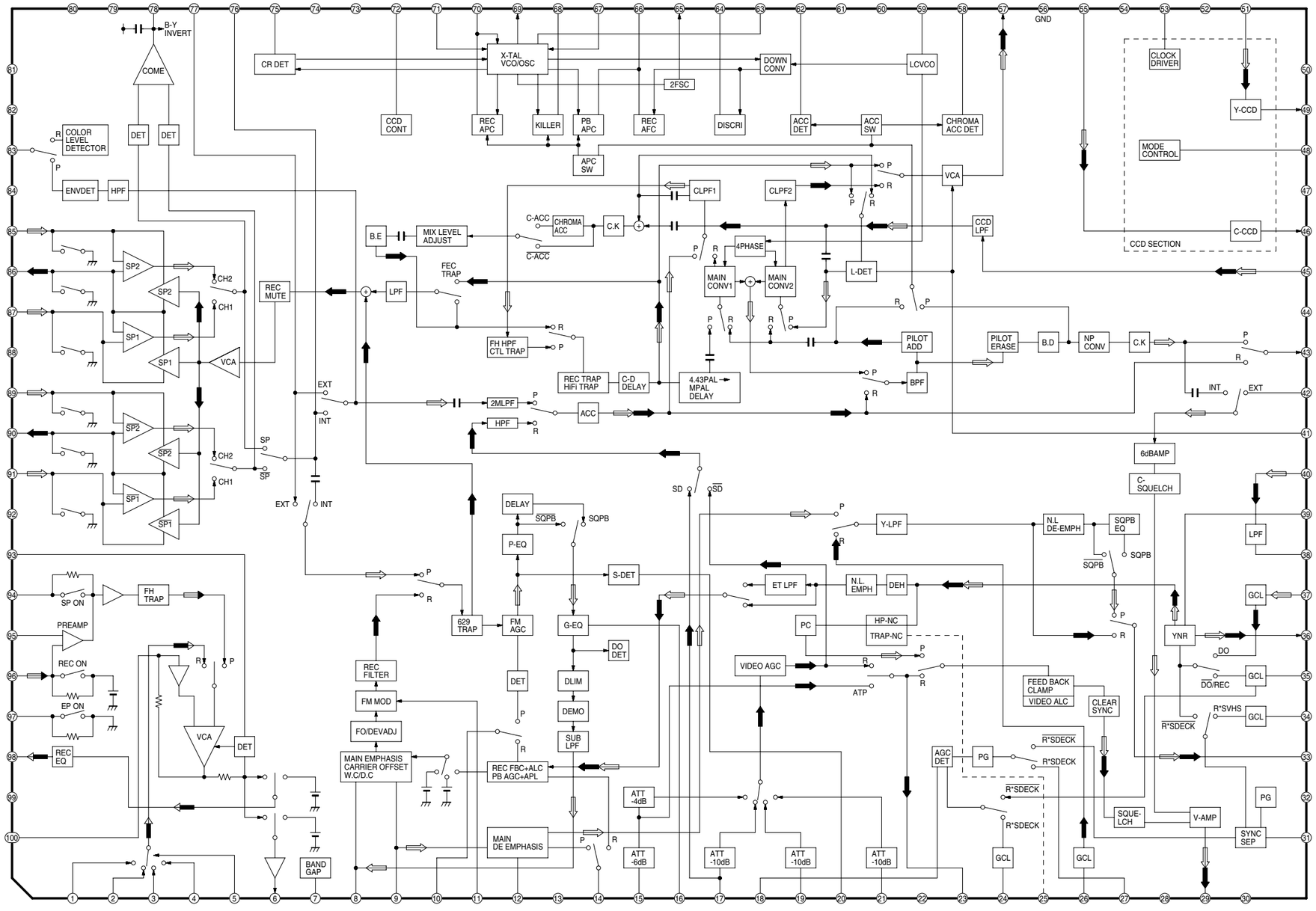

REC VIDEO SIGNAL
PB VIDEO SIGNAL
REC AUDIO SIGNAL
PB AUDIO SIGNAL
CAPSTAN SERVO
IC3001 C1AB0002002 (VIDEO/AUDIO PROCESS, HEAD AMP)
IC3301 C1AB00001731 (SWITCHING)
U7001 ENG56D06G1F (UHF/VHF TUNER)
P3501 (TO MECHANISM CHASSIS)
P5002 (TO CYLINDER HEAD)
P4001 (TO FULL ERASE HEAD)
P4002 (TO AUDIO CONTROL/ERASE HEAD)
P3002 (TO FRONT JACK C.B.A.P4591)
JK3001 K2HA612B0035
JK3004 K2HA507B0003
JK3003 K2HZ105B0007 (S-VIDEO OUT)
Q3200 2SD1819AHL (BUFFER)
Q3060 2SB0709A (BUFFER)
Q4150 UN2211 (SWITCHING END VCO-ON)
Q3030 2SD0601A (AMP)
Q3012 UN2213 (SWITCHING SP-OFF)
Q4101 UN2111 (SWITCHING LINEAR AUDIO-ON)
Q4102 2SD1819AHL (SWITCHING LINEAR AUDIO-ON)
Q4103 2SD1819AHL (SWITCHING LINEAR AUDIO-ON)
Q4105 2SD0620RL (BIAS OSC)
Q4106 2SB0710AHL (SWITCHING V.DELAY REC-ON)
Q4107 UN2213 (SWITCHING V.DELAY REC-ON)
T4101 G2A472C00003

LINK TO VOLTAGE CHART

LSJB2216
MAIN II (VIDEO SIGNAL PROCESS / AUDIO) SCHEMATIC DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

IC3001 VIDEO/AUDIO SIGNAL PROCESS/HEAD AMP IC-DETAIL BLOCK DIAGRAM

REC VIDEO SIGNAL　PB VIDEO SIGNAL　REC AUDIO SIGNAL　PB AUDIO SIGNAL



IC3001 DETAIL BLOCK DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

MAIN III (Hi-Fi) SCHEMATIC DIAGRAM

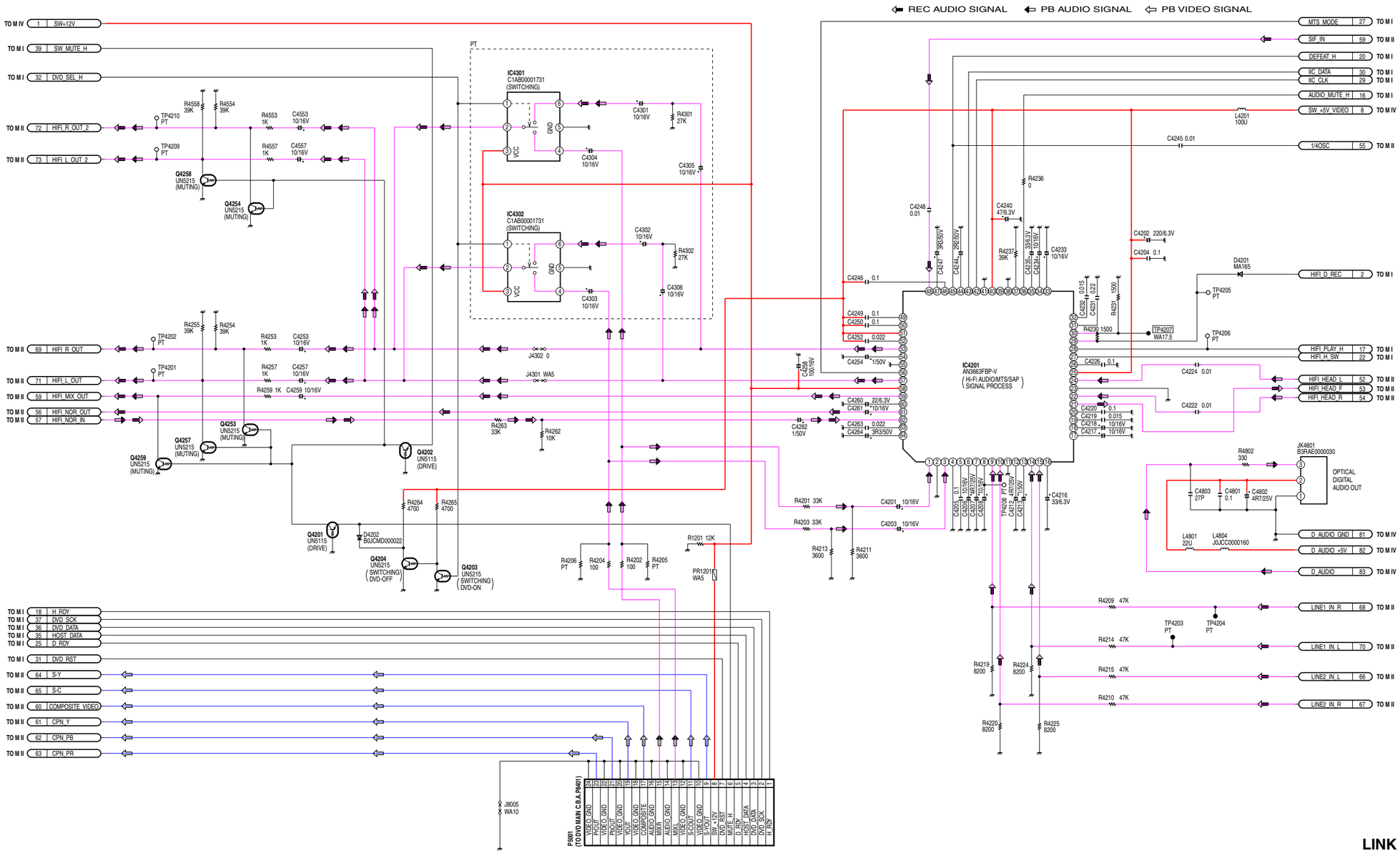
NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

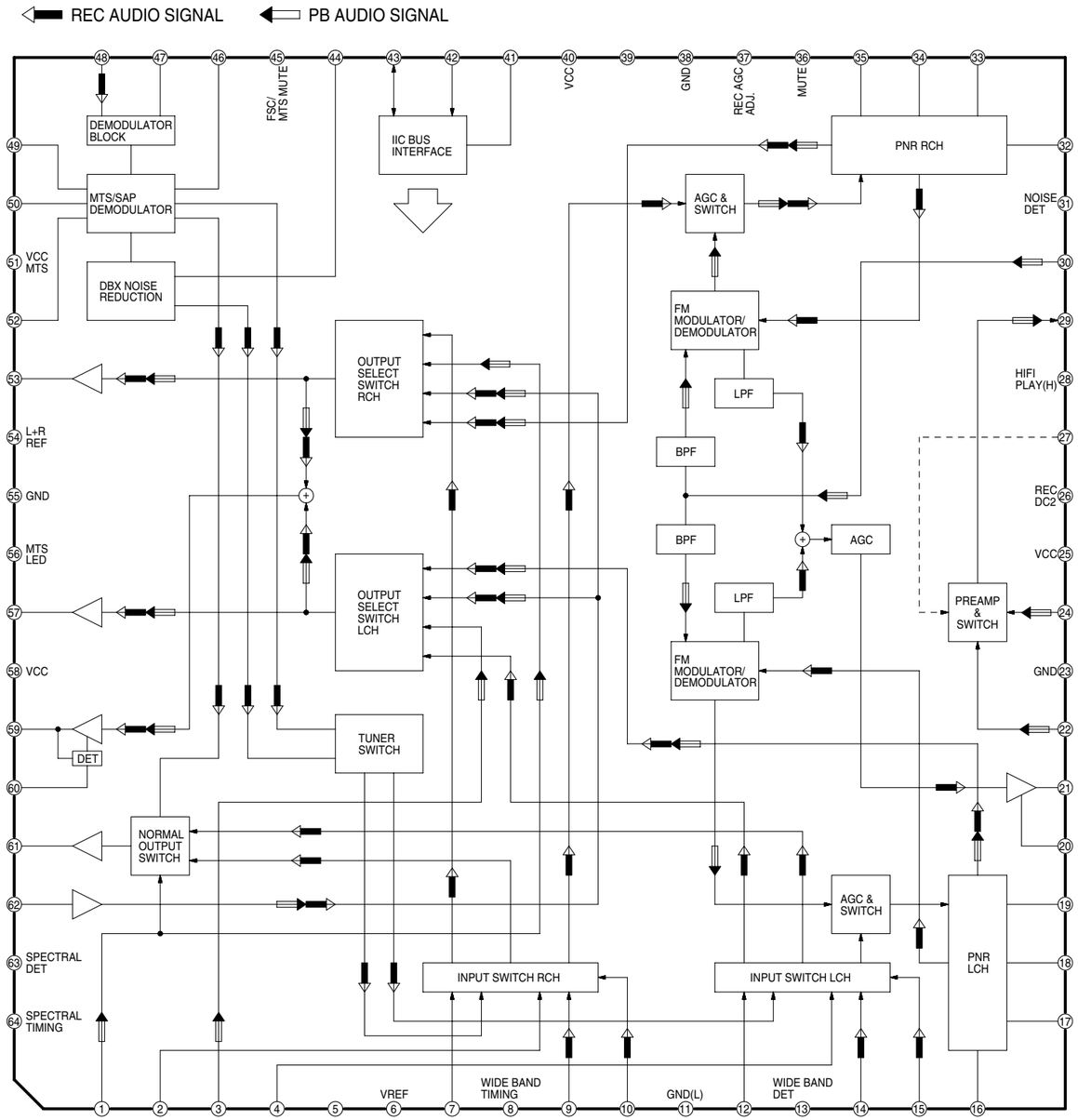
COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G
Not Used	PT


REC AUDIO SIGNAL
PB AUDIO SIGNAL
PB VIDEO SIGNAL
IC4301
C1AB00001731
(SWITCHING)
IC4302
C1AB00001731
(SWITCHING)
IC4201
AN3663FBP-V
(Hi-Fi AUDIO/MTS/SAP
SIGNAL PROCESS)
Q4258 UN5215 (MUTING)
Q4254 UN5215 (MUTING)
Q4253 UN5215 (MUTING)
Q4257 UN5215 (MUTING)
Q4259 UN5215 (MUTING)
Q4202 UN5115 (DRIVE)
Q4201 UN5115 (DRIVE)
Q4204 UN5215 (SWITCHING DVD-OFF)
Q4203 UN5215 (SWITCHING DVD-ON)
D4202 B0JCMD000022
L4201 100U
L4801 22U
L4804 J0JCC0000160
JK4801 B3RAE0000030
OPTICAL DIGITAL AUDIO OUT
P3001 (TO DVD MAIN C.B.A. R401)
TO M IV 1 SW+12V
TO M I 39 SW_MUTE_H
TO M I 32 DVD_SEL_H
TO M II 72 HIFI_R_OUT_2
TO M II 73 HIFI_L_OUT_2
TO M II 69 HIFI_R_OUT
TO M II 71 HIFI_L_OUT
TO M II 59 HIFI_MIX_OUT
TO M II 56 HIFI_NOR_OUT
TO M II 57 HIFI_NOR_IN
TO M I 18 H_RDY
TO M I 37 DVD_SCK
TO M I 36 DVD_DATA
TO M I 35 HOST_DATA
TO M I 25 D_RDY
TO M I 31 DVD_RST
TO M II 64 S-Y
TO M II 65 S-C
TO M II 60 COMPOSITE VIDEO
TO M II 61 CPN_Y
TO M II 62 CPN_PB
TO M II 63 CPN_PR
MTS_MODE 27 TO M I
SIF_IN 59 TO M II
DEFEAT_H 20 TO M I
IIC_DATA 30 TO M I
IIC_CLK 29 TO M I
AUDIO_MUTE_H 16 TO M I
SW_+5V_VIDEO 8 TO M IV
1/4OSC 55 TO M II
HIFI_D_REC 2 TO M I
HIFI_PLAY_H 17 TO M I
HIFI_H_SW 22 TO M I
HIFI_HEAD_L 52 TO M II
HIFI_HEAD_F 53 TO M II
HIFI_HEAD_R 54 TO M II
D_AUDIO_GND 81 TO M IV
D_AUDIO_+5V 82 TO M IV
D_AUDIO 83 TO M IV
LINE1_IN_R 68 TO M II
LINE1_IN_L 70 TO M II
LINE2_IN_L 66 TO M II
LINE2_IN_R 67 TO M II

LINK TO VOLTAGE CHART
LSJB2216
MAIN III (Hi-Fi) SCHEMATIC DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

IC4201 Hi-Fi AUDIO/MTS SAP SIGNAL PROCESS IC-DETAIL BLOCK DIAGRAM



IC4201 DETAIL BLOCK DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

MAIN IV (POWER SUPPLY) SCHEMATIC DIAGRAM

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE 3.0A 125V/250V FUSE.
ATTENTION:POUR UNE PROTECTION CONTINUE LES RISQUES D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME TYPE 3.0A 125V/250V

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

NOTE:
For placing a purchase order of the parts, be sure to use the part number listed in the parts list. Do not use the part number on this diagram.

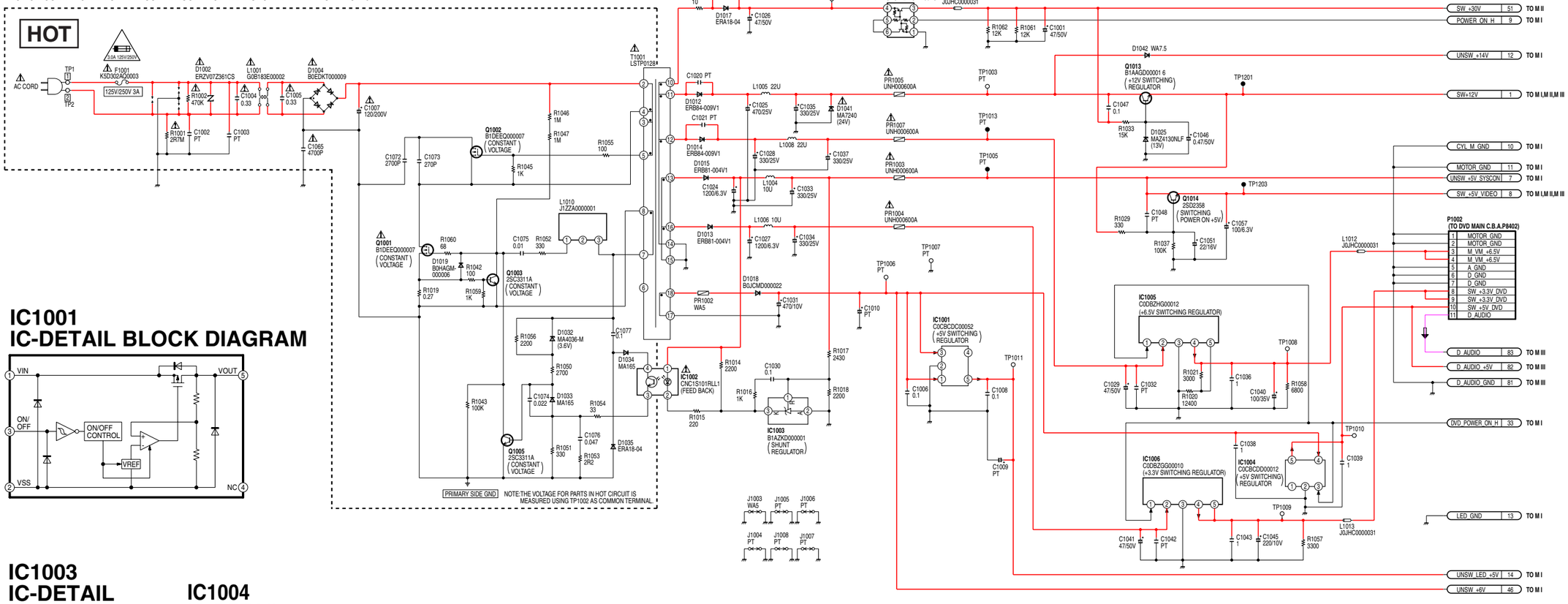
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
PARTS MARKED "PT" ARE NOT USED.

COMPARISON CHART OF MODELS & MARKS

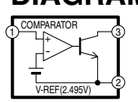
MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G
Not Used	PT

HOT CIRCUIT.BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.

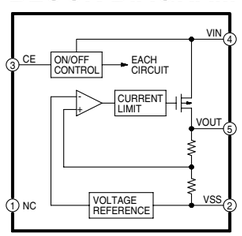


IC1001 IC-DETAIL BLOCK DIAGRAM

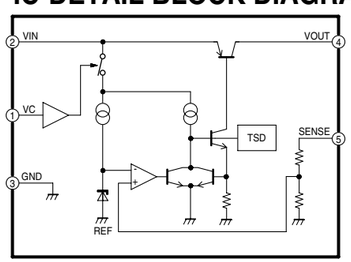
IC1003 IC-DETAIL BLOCK DIAGRAM



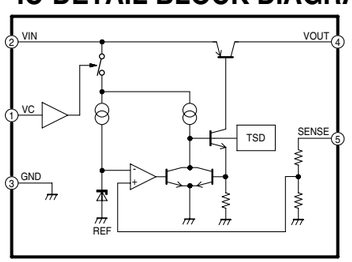
IC1004 IC-DETAIL BLOCK DIAGRAM



IC1005 IC-DETAIL BLOCK DIAGRAM



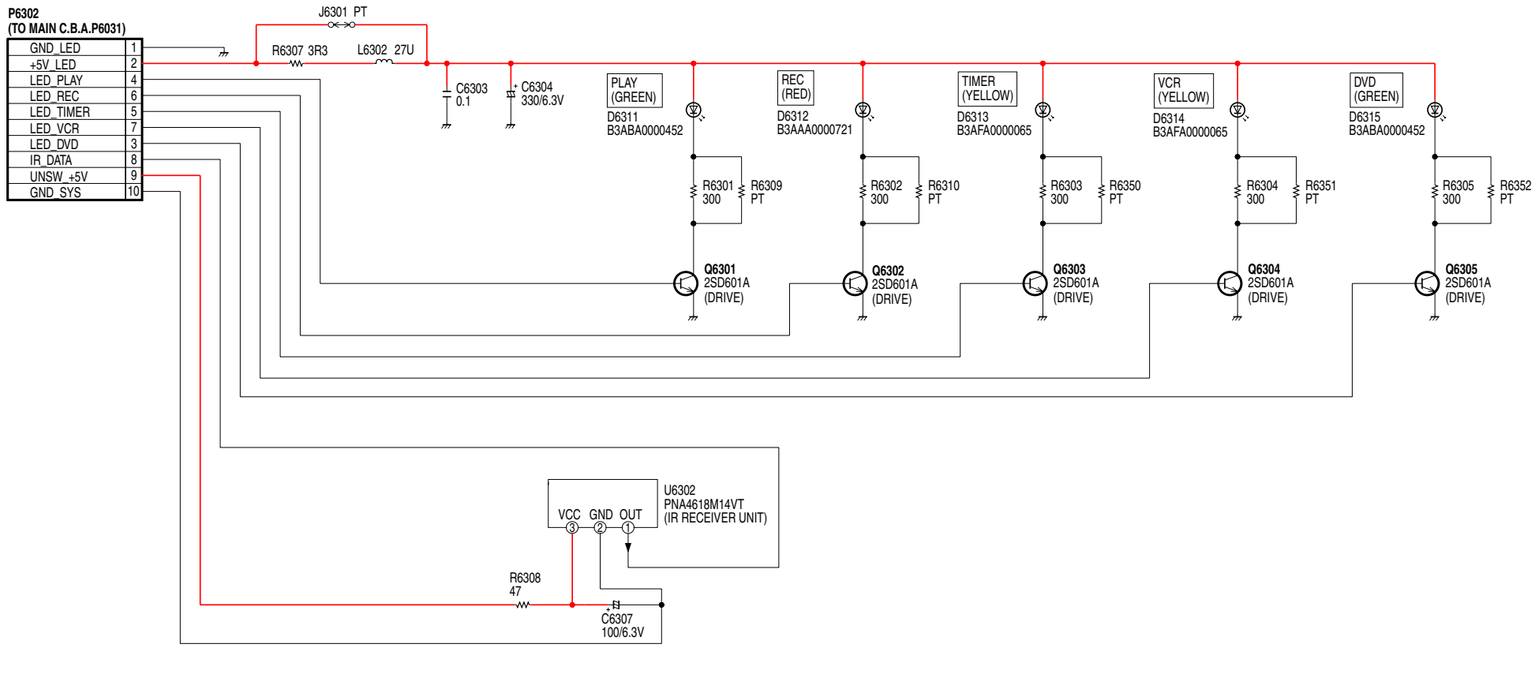
IC1006 IC-DETAIL BLOCK DIAGRAM



LINK TO VOLTAGE CHART
LSJB2216
MAIN IV (POWER SUPPLY) SCHEMATIC DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

7.3. OPERATION LED/ FRONT JACK SCHEMATIC DIAGRAMS

OPERATION LED SCHEMATIC DIAGRAM

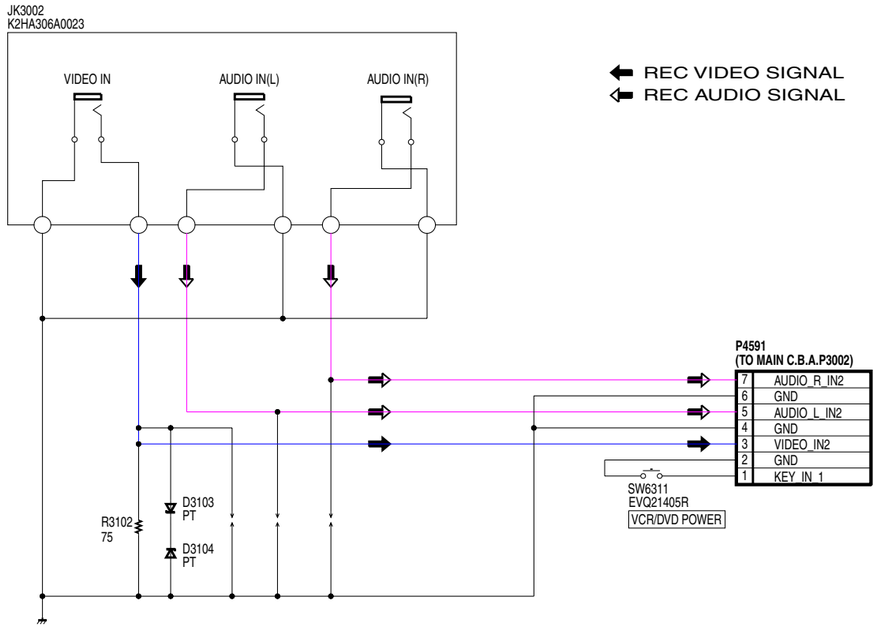


NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

FRONT JACK SCHEMATIC DIAGRAM



NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

LINK TO VOLTAGE CHART

LSJB2230
OPERATION LED SCHEMATIC DIAGRAM
LSJB2237
FRONT JACK SCHEMATIC DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

7.4. DVD MAIN/ DVD SUB SCHEMATIC DIAGRAMS

DVD MAIN I (DV21) SCHEMATIC DIAGRAM

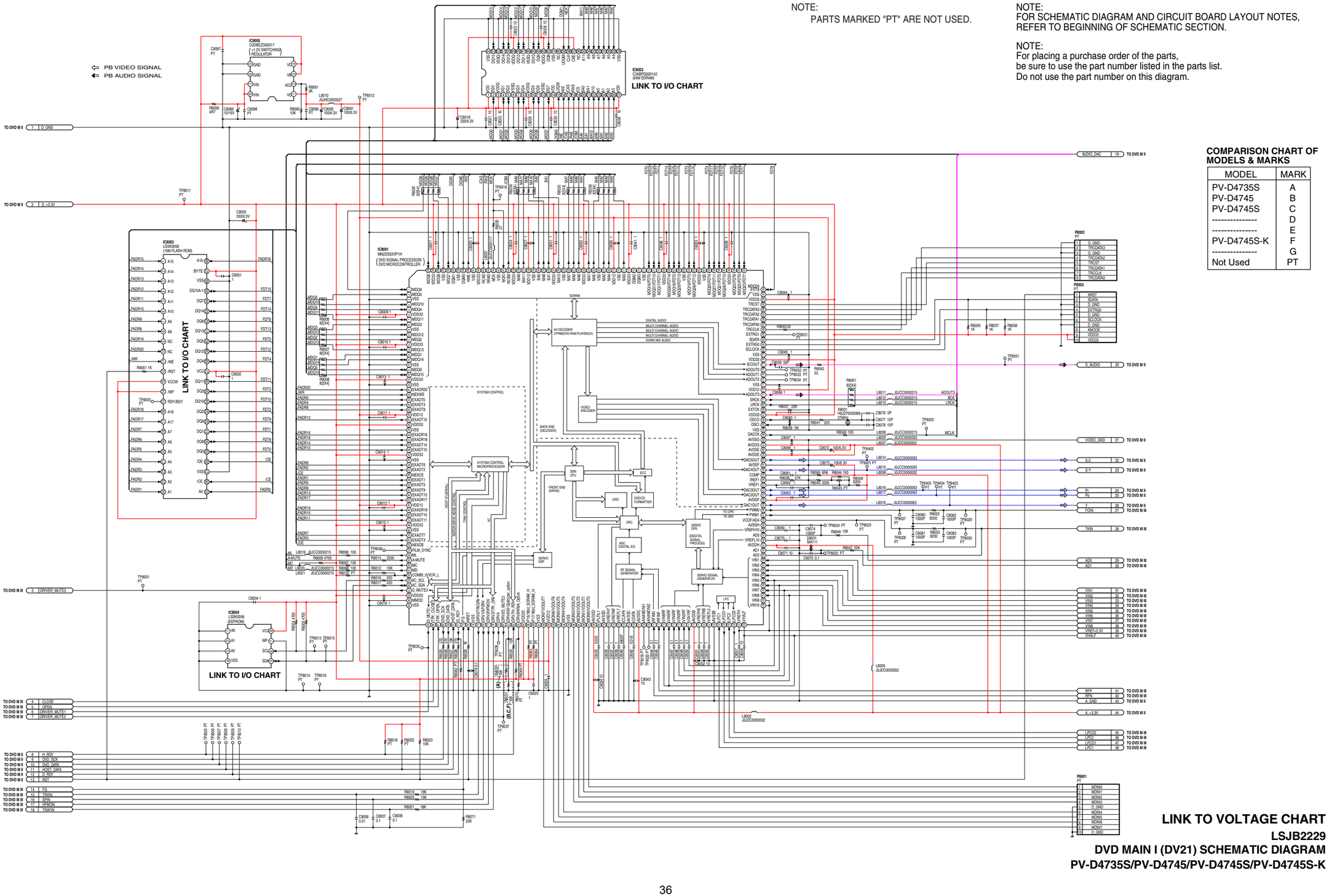
NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G
Not Used	PT



LINK TO VOLTAGE CHART

LSJB2229

DVD MAIN I (DV21) SCHEMATIC DIAGRAM

PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

I/O CHART OF IC8002

Pin No.	I/O	Signal Name	Description
1	I	A15	Memory address 16
2	I	A14	Memory address 15
3	I	A13	Memory address 14
4	I	A12	Memory address 13
5	I	A11	Memory address 12
6	I	A10	Memory address 11
7	I	A9	Memory address 10
8	I	A8	Memory address 9
9	I	NC	Memory address 20
10	I	NC	Memory address 21
11	I	/WE	Write enable : low
12	I	/RST	Reset : low
13	I	VCCW	+3.3V
14	-	WP	(Not used)
15	I	RDY/BSY	DVD Ready (Busy : low)
16	I	A18	Memory address 19
17	I	A17	Memory address 18
18	I	A7	Memory address 8
19	I	A6	Memory address 7
20	I	A5	Memory address 6
21	I	A4	Memory address 5
22	I	A3	Memory address 4
23	I	A2	Memory address 3
24	I	A1	Memory address 2
25	I	A0	Memory address 1
26	I	/CE	Memory chip select : low
27	-	VSS	Ground
28	I	/OE	Output enable : low
29	I/O	DQ0	Memory data 0
30	I/O	DQ8	Memory data 8
31	I/O	DQ1	Memory data 1
32	I/O	DQ9	Memory data 9
33	I/O	DQ2	Memory data 2
34	I/O	DQ10	Memory data 10
35	I/O	DQ3	Memory data 3
36	I/O	DQ11	Memory data 11
37	I	VCC	+3.3V
38	I/O	DQ4	Memory data 4
39	I/O	DQ12	Memory data 12
40	I/O	DQ5	Memory data 5
41	I/O	DQ13	Memory data 13
42	I/O	DQ6	Memory data 6
43	I/O	DQ14	Memory data 14
44	I/O	DQ7	Memory data 7
45	I/O	DQ15A-1	Memory data 15
46	-	VSS	Ground
47	I	/BYTE	+3.3V
48	I	A16	Memory address 16

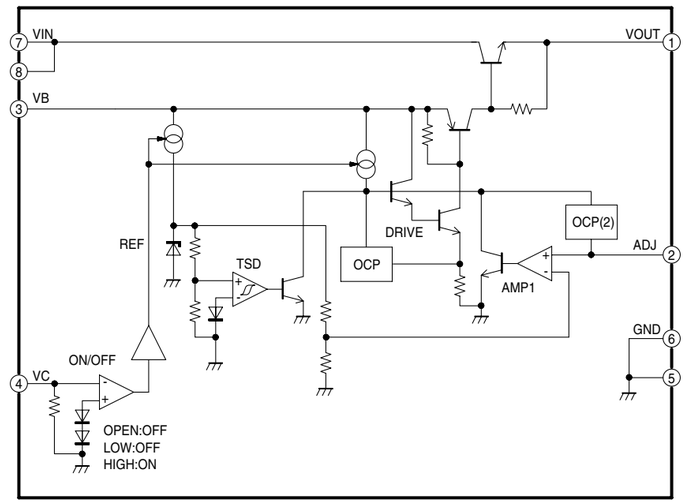
I/O CHART OF IC8003

Pin No.	I/O	Signal Name	Description
1	I	VDD	+3.3V
2	I/O	DQ0	SDRAM data 0
3	I	VDDQ	+3.3V
4	I/O	DQ1	SDRAM data 1
5	I/O	DQ2	SDRAM data 2
6	-	VSSQ	Ground
7	I/O	DQ3	SDRAM data 3
8	I/O	DQ4	SDRAM data 4
9	I	VDDQ	+3.3V
10	I/O	DQ5	SDRAM data 5
11	I/O	DQ6	SDRAM data 6
12	-	VSSQ	Ground
13	I/O	DQ7	SDRAM data 7
14	I	VDD	+3.3V
15	I	LDQM	Data input/output mask
16	I	/WE	Write enable : low
17	I	/CAS	Column address strobe : low
18	I	/RAS	Row address strobe :low
19	I	/CS	SDRAM chip select : low
20	I	BA0	Bank address 0
21	I	BA1	Bank address 1
22	I	A10/AP	SDRAM address 10
23	I	A0	SDRAM address 0
24	I	A1	SDRAM address 1
25	I	A2	SDRAM address 2
26	I	A3	SDRAM address 3
27	I	VDD	+3.3V
28	-	VSS	Ground
29	I	A4	SDRAM address 4
30	I	A5	SDRAM address 5
31	I	A6	SDRAM address 6
32	I	A7	SDRAM address 7
33	I	A8	SDRAM address 8
34	I	A9	SDRAM address 9
35	I	A11	SDRAM address 11
36	-	NC	(Not used)
37	-	CKE	(Not used)
38	I	CLK	SDRAM clock
39	I	UDQM	Data input/output mask
40	-	NC	(Not used)
41	-	VSS	Ground
42	I/O	DQ8	SDRAM data 8
43	I	VDDQ	+3.3V
44	I/O	DQ9	SDRAM data 9
45	I/O	DQ10	SDRAM data 10
46	-	VSSQ	Ground
47	I/O	DQ11	SDRAM data 11
48	I/O	DQ12	SDRAM data 12
49	I	VDDQ	+3.3V
50	I/O	DQ13	SDRAM data 13
51	I/O	DQ14	SDRAM data 14
52	-	VSSQ	Ground
53	I/O	DQ15	SDRAM data 15
54	-	VSS	Ground

I/O CHART OF IC8004

Pin No.	I/O	Signal Name	Description
1	-	A0	(Not used)
2	-	A1	(Not used)
3	-	A2	(Not used)
4	-	VSS	Ground
5	I/O	SDA	Serial data
6	I	SCL	Serial clock
7	-	WP	Write protect
8	I	VCC	+3.3V

IC8005
IC-DETAIL BLOCK DIAGRAM



I/O CHART OF IC8002,IC8003,IC8004/IC8005 DETAIL BLOCK DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

DVD MAIN II (VIDEO/AUDIO) SCHEMATIC DIAGRAM

NOTE:
PARTS MARKED "PT" ARE NOT USED.

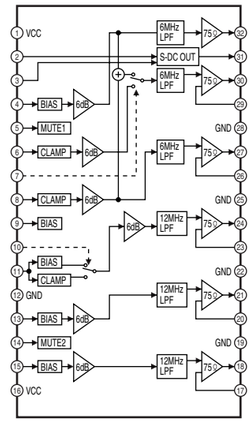
NOTE:
For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

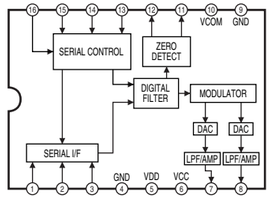
COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G
Not Used	PT

IC8401
IC-DETAIL BLOCK DIAGRAM



IC8501
IC-DETAIL BLOCK DIAGRAM



LINK TO VOLTAGE CHART
LSJB2229
DVD MAIN II (VIDEO/AUDIO) SCHEMATIC DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

DVD MAIN III (DRIVER/PICK) SCHEMATIC DIAGRAM

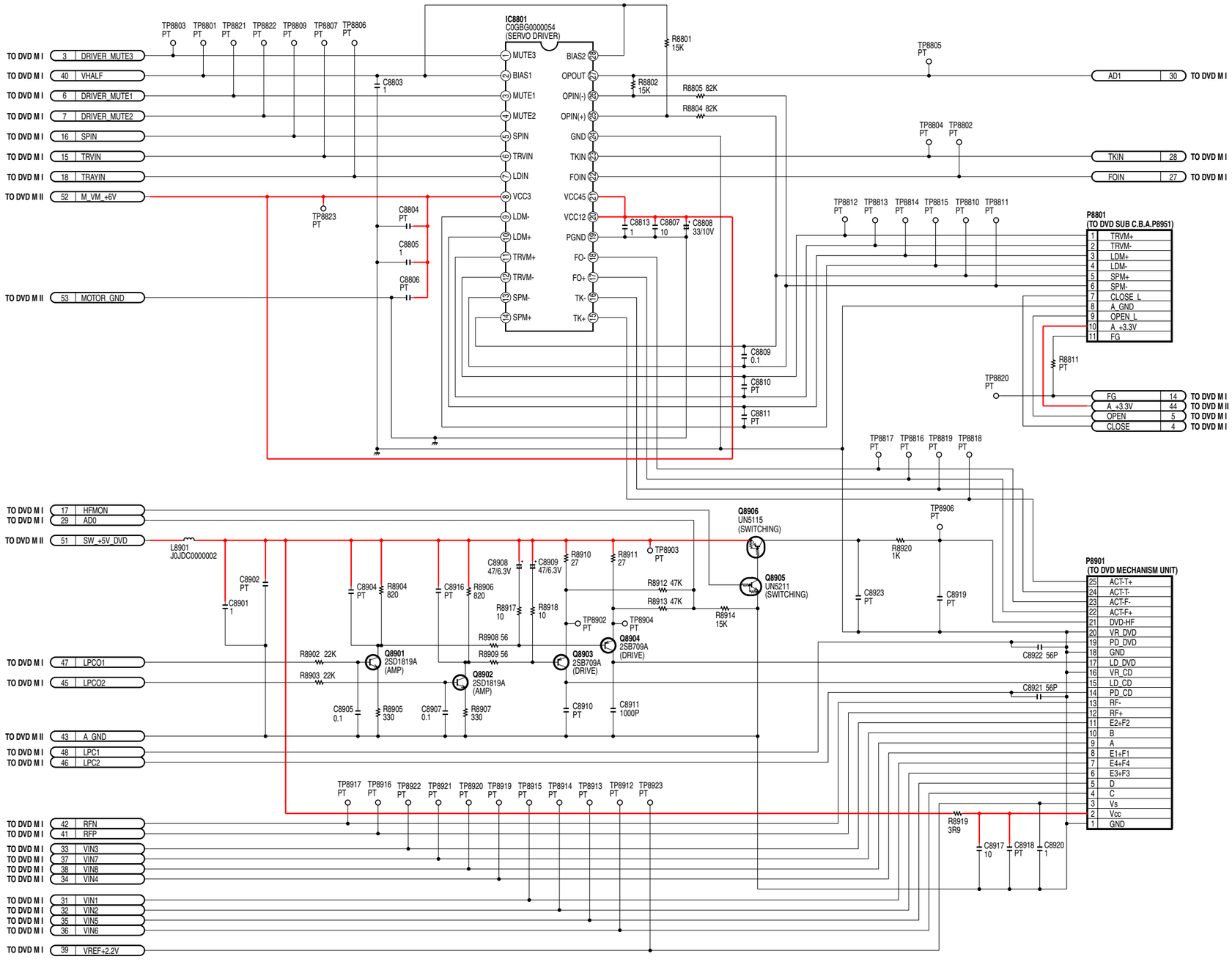
NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

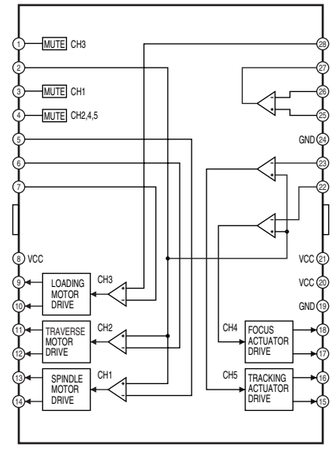
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G
Not Used	PT



IC8801 IC-DETAIL BLOCK DIAGRAM



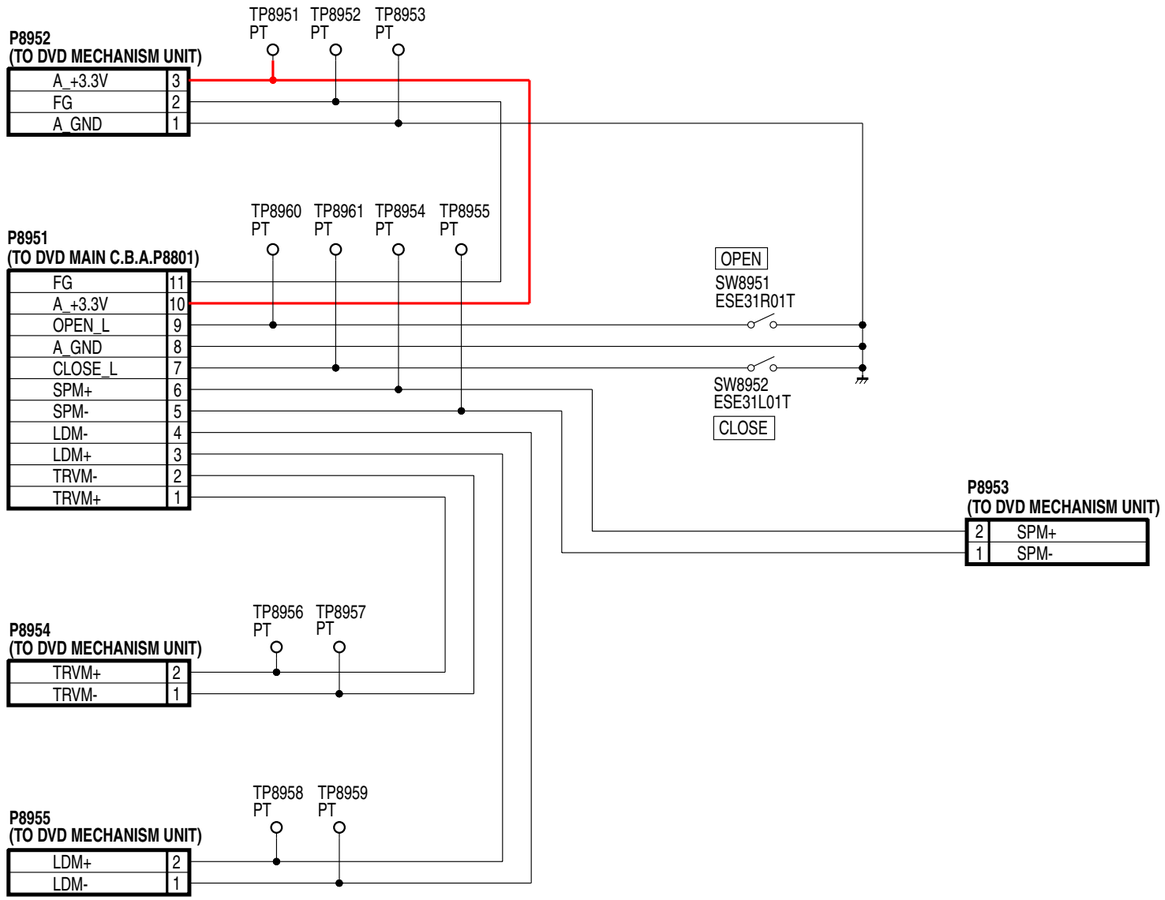
LINK TO VOLTAGE CHART
LSJB2229
DVD MAIN III (DRIVER/PICK) SCHEMATIC DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

DVD SUB SCHEMATIC DIAGRAM

NOTE:
PARTS MARKED "PT" ARE NOT USED.

NOTE:
For placing a purchase order of the parts,
be sure to use the part number listed in the parts list.
Do not use the part number on this diagram.

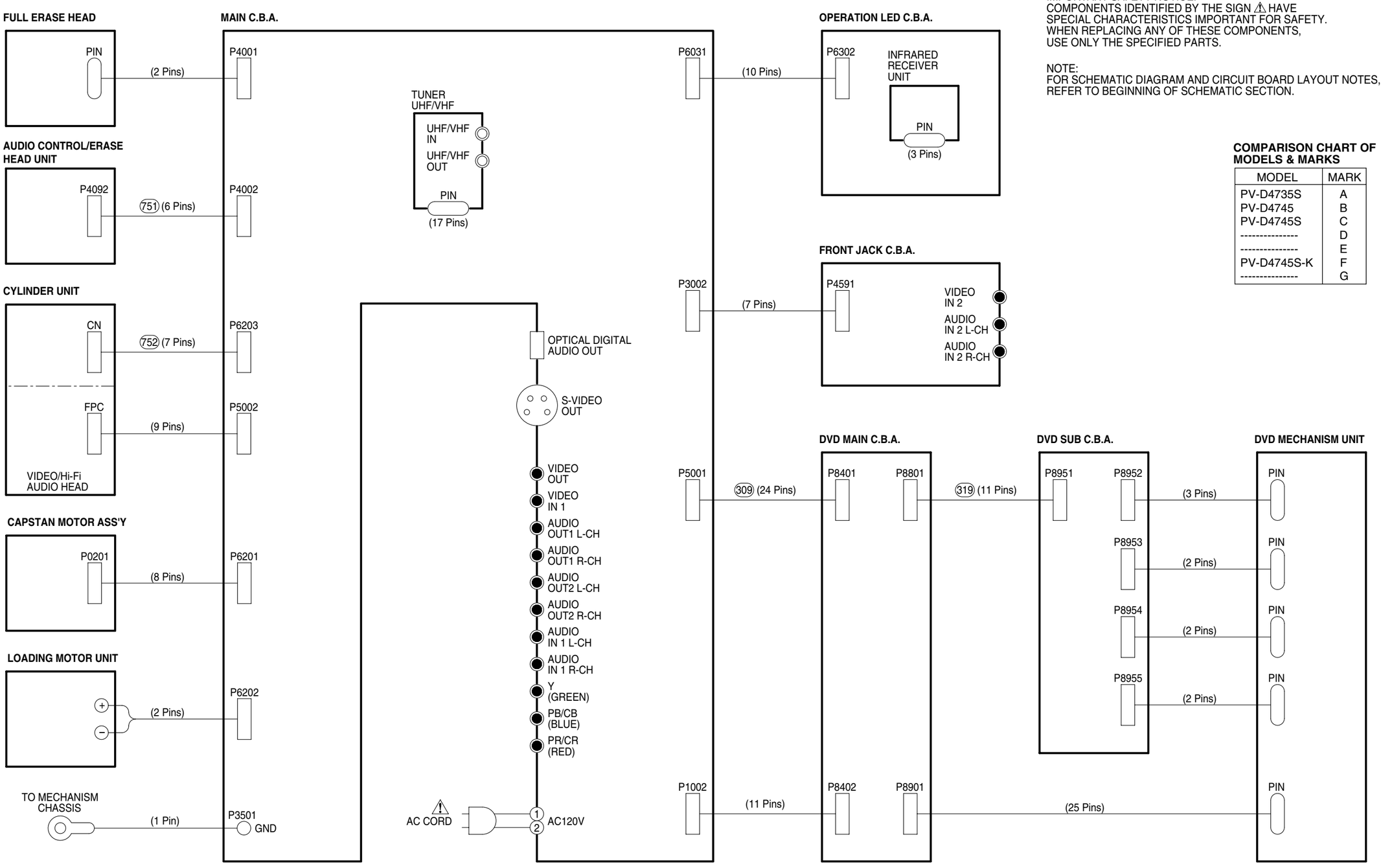
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.



LSJB2187
DVD SUB SCHEMATIC DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

7.5. INTERCONNECTION SCHEMATIC DIAGRAM

INTERCONNECTION SCHEMATIC DIAGRAM



IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G

INTERCONNECTION SCHEMATIC DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

7.6. VOLTAGE CHART

MAIN C.B.A. (SYSTEM CONTROL/SERVO SECTION)

MODE / PINNO	REC	PLAY
IC1301		
1	17.3	17.3
2	4.9	4.9
3	12.1	12.1
4	0	0
5	0	0
IC1302		
1	6.1	6.1
2	0	0
3	4.9	4.9
4	0	0
5	5.0	5.0
IC6001		
1	5.2	5.2
2	5.2	5.2
3	5.2	5.2
4	5.2	5.2
5	-	-
6	2.5	2.5
7	5.1	5.1
8	5.1	5.1
9	3.3	4.0
10	0	0
11	4.9	4.9
12	-	-
13	5.2	0
14	5.2	5.1
15	5.2	5.2
16	5.2	0
17	0	0
18	2.6	2.6
19	0	2.6
20	5.2	0
21	5.1	5.1
22	0	0
23	5.1	5.1
24	0	0
25	0	0
26	4.0	4.1
27	2.0	2.0
28	0	0
29	4.7	4.7
30	0	0
31	5.1	5.1
32	5.1	5.1
33	0	0
34	5.2	5.2
35	5.2	5.2
36	-	-
37	5.2	5.2
38	-	-
39	-	-
40	0	0
41	-	-
42	-	-

MODE / PINNO	REC	PLAY
43	5.2	5.2
44	3.1	3.1
45	3.1	3.1
46	0	0
47	1.5	1.5
48	2.3	2.3
49	0	0
50	1.6	1.6
51	0	0
52	1.5	1.5
53	5.0	5.0
54	2.1	2.1
55	2.5	2.3
56	1.8	1.8
57	0	0
58	0	0
59	0	0
60	0	0
61	5.1	5.1
62	0	0
63	0	0
64	0	0
65	0	0
66	5.2	5.2
67	5.2	5.2
68	4.9	4.9
69	0	0
70	4.9	0
71	3.3	3.2
72	3.0	2.9
73	0	0
74	0	0
75	0	4.9
76	2.5	2.5
77	2.5	2.5
78	5.2	5.2
79	4.7	4.7
80	3.8	3.8
81	0	0
82	0	0
83	5.1	5.1
84	2.0	2.0
85	0	0
86	2.6	2.6
87	2.6	2.6
88	0	0
89	5.2	5.2
90	1.4	1.4
91	2.6	2.6
92	2.6	2.6
93	-	-
94	2.4	2.4
95	2.7	2.6
96	2.6	2.6
97	2.6	2.6

MODE / PINNO	REC	PLAY
98	5.2	5.2
99	5.2	5.2
100	0	0
IC6002		
1	1.2	1.2
2	0	0
3	0	0
4	4.7	4.7
IC6003		
1	2.4	2.4
2	1.2	1.2
3	0	0
4	5.1	5.1
IC6004		
1	0	0
2	0	0
3	0	0
4	0	0
5	3.0	3.0
6	3.3	3.3
7	0	0
8	5.0	5.0
IC6005		
1	5.2	5.2
2	5.2	5.2
3	0	0
4	0	0
5	5.2	5.2
6	0	0
IC6201		
1	11.9	11.8
2	1.8	1.8
3	0	0
4	0.3	0.3
5	0	0
6	0	0
7	16.5	16.5
8	0	0
9	2.8	2.8
10	1.6	1.6
11	1.6	1.6
12	0.7	0.7
13	1.5	1.5
14	2.5	2.5
15	2.5	2.5
16	2.6	2.6
17	2.6	2.6
18	1.3	1.3
19	5.0	5.0
20	3.6	3.6
21	11.9	11.9
22	3.6	3.6
23	3.6	3.6
24	0	0
25	3.5	3.5

MODE / PINNO	REC	PLAY
26	0	0
27	0	0
Q6003		
E	0	0
C	0.1	0.1
B	0.7	0.7
Q6004		
E	5.2	5.2
C	5.2	5.2
B	4.4	4.4
Q6005		
E	5.2	5.2
C	5.1	5.1
B	4.5	4.5
Q6006		
E	0	0
C	5.1	5.1
Q6007		
E	0	0
C	5.1	5.1
Q6008		
E	0	0
C	5.2	5.2
B	0	0
Q6009		
E	2.2	2.2
C	0	0
B	1.5	1.5
TP6001	0	0
TP6002	5.2	5.2
TP6003	5.2	5.2
TP6004	0	0
TP6005	5.1	5.1
TP6006	5.1	5.1
TP6007	1.6	1.6
TP6008	1.6	1.6
TP6009	5.1	5.1
TP6010	1.5	1.5
TP6011	5.2	5.2
TP6012	3.2	3.2
TP6013	3.0	3.0
TP6014	0	0
TP6015	0	0
TP6016	5.1	5.1
TP6017	5.1	5.1
TP6018	4.2	4.2
TP6019	0	0
TP6020	5.2	5.2
TP6021	4.2	4.2
TP6023	1.8	1.8
TP6026	0	0
TP6028	0	0
TP6035	5.2	5.2
TP6036	4.8	4.8
TP6201	2.5	2.5

MODE / PINNO	REC	PLAY
TP6202	2.5	2.5
TP6203	2.5	2.5
TP6204	2.5	2.5
TP6205	2.6	2.6
TP6206	2.5	2.5
TP6207	2.6	2.6
TP6208	2.6	2.6
TP6303	0	0
TP6304	5.1	5.1
TP6305	5.1	5.1
TP6306	0	0
TP6801	5.1	5.1
TP6802	4.0	4.0
TP6803	5.2	5.2
TP6804	0	0
TP6805	0	0
TP6806	0	0
TP6807	5.1	0
TP6808	3.3	3.3
TP6810	0	0
TP6811	0	0
TP6812	5.2	5.2
TP6813	5.2	5.2

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

MAIN C.B.A. (POWER SUPPLY/VIDEO/AUDIO SECTION)

MODE / PIN NO.	STOP
IC1001	
1	6
2	0
3	6
4	0
5	5
IC1002	
1	5.3
2	4.2
3	1.2
4	7.3
IC1003	
1	2.5
2	0
3	3.6
IC1004	
1	-
2	0
3	0
4	6
5	0
IC1005	
1	0
2	8.9
3	0
4	0
5	0
IC1006	
1	0
2	5
3	0
4	0
5	0
IC3001	
1	-
2	0
3	-
4	5.1
5	2.1
6	2.6
7	2.8
8	1.9
9	1.9
10	1.9
11	2.6
12	1.8
13	0
14	2.7
15	2.7
16	2
17	2.8
18	2
19	2.7
20	0
21	2.7
22	5
23	2.3
24	-
25	0
26	3
27	-
28	0
29	2.2
30	2.8
31	0.4
32	2.4
33	2.1
34	-
35	3
36	2.3
37	3
38	2.2
39	1.4
40	2.1
41	2.8
42	2
43	2.1
44	0
45	3.2
46	3.2
47	5
48	4.8
49	3.2
50	5
51	1.9
52	5
53	2.6
54	0
55	2
56	0
57	2.2
58	2.2
59	4.9
60	4.9
61	3.9
62	2.3
63	2.2
64	2.3
65	2.3
66	2.3
67	2.2
68	1.2
69	2
70	2.7
71	-
72	4.9
73	3.7
74	3.4
75	2.8
76	2.2
77	-
78	-
79	0
80	2.3
81	0
82	-
83	3.4
84	5
85	2.2
86	2.2
87	2.2
88	0
89	2.2
90	2.2
91	2.2
92	5.1
93	0.5
94	2.5
95	2.5
96	2.5
97	0
98	2.3
99	0
100	2.6
IC3301	
1	0
2	2.2
3	12
4	2.2
5	0
6	2.6
IC4201	
1	2.5
2	0
3	2.5
4	0
5	2.4
6	2.5
7	2.2
8	0.4
9	0
10	0
11	0
12	2.2
13	2.6
14	0
15	0
16	2.6
17	0.8
18	2.6
19	2.5
20	2.1
21	2.1
22	2.1
23	0
24	2.1
25	5
26	2.1
27	0
28	4.1
29	1.5
30	0.8
31	0.1
32	2.5
33	2.5
34	0.7
35	2.5
36	0
37	1.7
38	0
39	-
40	5
41	0
42	3.6
43	3.4
44	2.3
45	0
46	3.3
47	2.2
48	2.2
49	3.4
50	3.3
51	5
52	3.3
53	6
54	2.5
55	0
56	0
57	6
58	12.2
59	5.9
60	0.2
61	2.5
62	2.5
63	2.7
64	0.6
Q1001	
S	0
G	1.9
D	155
Q1002	
S	155
G	161
D	111
Q1003	
E	0
C	1.9
B	0
Q1004	
1	0
2	4.9
3	32.1
4	32.1
5	0
6	0
Q1005	
E	0
C	2.1
B	0.5
Q1013	
E	12.4
C	14.6
B	13
Q1014	
E	5.2
C	5.2
B	5.9
Q3012	
E	0
C	0
B	0
Q3030	
E	0.9
C	5
B	1.5
Q3060	
E	2.9
C	0
B	2.2
Q3200	
E	2.2
C	5.1
B	2.9
Q4101	
E	5.1
C	5
B	0
Q4102	
E	0
C	0
B	0.8
Q4103	
E	0
C	0
B	0.8
Q4105	
E	0
C	2.2
B	2.2
Q4106	
E	5.1
C	0.2
B	5.1
Q4107	
E	0
C	5.1
B	0
Q4150	
E	0
C	0
B	5.1
Q4201	
E	0
C	-0.6
B	0
Q4202	
E	0
C	-0.6
B	0
Q4203	
E	0
C	3.5
B	0
Q4204	
E	0
C	0
B	3.5
Q4253	
E	0
C	0
B	-0.6
Q4254	
E	0
C	0
B	-0.6
Q4257	
E	0
C	0
B	-0.6
Q4258	
E	0
C	0
B	-0.6
Q4259	
E	0
C	0
B	-1.1
TP1002	32.1
TP1003	14.6
TP1005	5.2
TP1006	6
TP1007	0
TP1008	0
TP1009	0
TP1010	0
TP1011	5
TP1013	9
TP1201	12.3
TP1203	5.2
TP3001	2.2
TP3002	2.2
TP3003	2.2
TP3043	2.1
TP4002	0
TP4201	0
TP4202	0
TP4203	0
TP4204	0
TP4205	1.5
TP4206	4.1
TP4207	0.7
TP4208	0.4
TP4209	0
TP4210	0

OPERATION LED C.B.A.

MODE / PIN NO.	STOP
Q6301	
E	0
C	3.9
B	0
Q6302	
E	0
C	4.1
B	0
Q6303	
E	0
C	3.9
B	0
Q6304	
E	0
C	0
B	0.8
Q6305	
E	0
C	3.9
B	0

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

VOLTAGE CHART
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

DVD MAIN C.B.A.

MODE / PIN NO.	STOP
IC8001	
1	-
2	-
3	0
4	-
5	-
6	3.3
7	-
8	-
9	0
10	-
11	-
12	3.3
13	-
14	-
15	-
16	0
17	-
18	-
19	3.3
20	0
21	3.4
22	3.4
23	-
24	-
25	-
26	1.2
27	-
28	3.3
29	0
30	0.4
31	0.9
32	-
33	-
34	3.3
35	0
36	-
37	-
38	2.2
39	-
40	-
41	-
42	-
43	0.3
44	1.2
45	0.1
46	-
47	-
48	3.3
49	0
50	-
51	-
52	2.0
53	0
54	3.3

MODE / PIN NO.	STOP
55	-
56	3.4
57	3.4
58	3.3
59	3.3
60	3.4
61	-
62	3.3
63	0
64	0
65	-
66	3.4
67	3.4
68	-
69	3.4
70	-
71	0.1
72	1.2
73	3.4
74	0
75	1.7
76	2.4
77	-
78	0.1
79	-
80	3.4
81	3.3
82	3.1
83	-
84	3.3
85	-
86	-
87	0
88	-
89	1.2
90	3.4
91	3.4
92	3.4
93	0
94	-
95	-
96	-
97	-
98	3.3
99	0.9
100	0
101	2.4
102	2.2
103	1.9
104	0.3
105	0
106	1.4
107	3.3
108	2.1
109	-

MODE / PIN NO.	STOP
110	1.9
111	1.9
112	1.7
113	1.7
114	1.7
115	1.7
116	1.7
117	1.7
118	3.3
119	2.0
120	1.7
121	1.5
122	0
123	0.4
124	1.2
125	0.4
126	0.2
127	2.3
128	1.7
129	2.3
130	2.2
131	2.4
132	2.4
133	2.4
134	2.4
135	2.0
136	2.0
137	2.0
138	2.0
139	1.8
140	-
141	3.4
142	1.3
143	-
144	2.1
145	0
146	0.5
147	1.7
148	1.7
149	0.7
150	0
151	0.5
152	0.5
153	1.4
154	1.4
155	2.2
156	0.5
157	0
158	0.9
159	3.3
160	0
161	3.3
162	0
163	1.8
164	0

MODE / PIN NO.	STOP
165	1.7
166	1.7
167	3.3
168	1.6
169	1.8
170	1.7
171	1.4
172	1.3
173	0
174	0
175	0
176	0
177	1.7
178	3.3
179	0
180	-
181	-
182	-
183	-
184	-
185	-
186	-
187	-
188	-
189	-
190	3.3
191	0
192	-
193	1.5
194	-
195	-
196	3.3
197	-
198	-
199	-
200	-
201	0
202	3.3
203	-
204	-
205	0
206	-
207	-
208	-
209	3.3
210	-
211	-
212	-
213	0
214	2.4
215	2.4
216	3.3
217	-
218	0
219	1.3

MODE / PIN NO.	STOP
220	-
221	-
222	0
223	-
224	-
225	3.3
226	-
227	-
228	-
229	0
230	-
231	3.3
232	1.7
233	-
234	2.3
235	0
236	1.3
237	-
238	-
239	3.3
240	3.0
241	3.3
242	0
243	1.9
244	3.3
245	3.2
246	3.3
247	0
248	0
249	2.4
250	0
251	1.5
252	-
253	0
254	-
255	3.3
256	-
IC8002	
1	-
2	-
3	-
4	-
5	-
6	-
7	-
8	-
9	0.1
10	3.4
11	3.4
12	3.4
13	3.3
14	3.2
15	0.9
16	0.9
17	0.3

MODE / PIN NO.	STOP
18	-
19	-
20	-
21	-
22	-
23	-
24	-
25	-
26	2.2
27	0
28	2.0
29	-
30	-
31	-
32	-
33	-
34	-
35	-
36	-
37	3.3
38	3.3
39	-
40	-
41	0
42	-
43	3.3
44	-
45	-
46	0
47	3.3
48	0.4
IC8003	
1	3.3
2	-
3	3.3
4	-
5	-
6	0
7	-
8	-
9	3.3
10	-
11	-
12	0
13	-
14	3.3
15	2.4
16	0
17	3.2
18	3.3
19	3.0
20	2.3
21	1.7
22	-
23	-

MODE / PIN NO.	STOP
24	-
25	-
26	-
27	3.3
28	0
29	-
30	-
31	-
32	-
33	-
34	-
35	-
36	-
37	3.3
38	3.3
39	1.5
40	-
41	0
42	-
43	3.3
44	-
45	-
46	0
47	-
48	-
49	3.3
50	-
51	-
52	0
53	-
54	0
IC8004	
1	0
2	0
3	0
4	0
5	3.3
6	3.2
7	0
8	3.3
IC8005	
1	1.2
2	1.1
3	3.3
4	3.3
5	0
6	0
7	2.2
8	2.2
IC8401	
1	5.0
2	0.1
3	0.1
4	2.1
5	5.0

MODE / PIN NO.	STOP
6	1.0
7	0
8	1.5
9	2.2
10	0
11	1.5
12	0
13	2.1
14	5.0
15	2.2
16	4.9
17	2.3
18	2.3
19	0
20	2.2
21	2.2
22	0
23	1.3
24	1.5
25	0
26	1.3
27	1.5
28	0
29	1.4
30	1.6
31	0.1
32	2.3
IC8501	
1	1.7
2	0.1
3	1.7
4	0
5	3.3
6	5.0
7	0.1
8	0.1
9	0
10	0
11	-
12	-
13	1.6
14	0.4
15	3.3
16	0.3
IC8503	
1	6.2
2	1.0
3	6.2
4	0
5	6.0
6	6.0
7	0.1
8	12.0
IC8801	
1	0

MODE / PIN NO.	STOP
2	1.6
3	3.3
4	3.3
5	1.8
6	1.6
7	1.6
8	6.5
9	3.0
10	3.0
11	3.1
12	2.9
13	1.4
14	4.6
15	3.0
16	3.0
17	3.0
18	3.0
19	0
20	6.5
21	6.5
22	1.6
23	1.6
24	0
25	2.1
26	2.1
27	2.2
28	1.6
Q8504	
E	0
C	0
B	0.1
Q8505	
E	0.1
C	3.3
B	0
Q8901	
E	0.1
C	0
B	0
Q8902	
E	5.1
C	0
B	5.1
Q8903	
E	5.1
C	0
B	5.1
Q8904	
E	5.1
C	0
B	5.1
Q8905	
E	0
C	3.9
B	0.3

MODE / PIN NO.	STOP
Q8906	
E	5.0
C	5.1
B	0.1
TP8001	0
TP8003	2.2
TP8005	4.4
TP8006	3.4
TP8007	3.4
TP8008	4.8
TP8009	2.9
TP8010	3.5
TP8011	3.3
TP8012	1.3
TP8013	3.3
TP8014	0
TP8015	3.3
TP8016	0
TP8018	1.7
TP8019	1.8
TP8020	1.7
TP8021	0
TP8022	1.6
TP8023	1.4
TP8024	2.0
TP8025	1.7
TP8027	1.6
TP8028	1.6
TP8029	1.5
TP8030	1.5
TP8031	1.7
TP8032	0.1
TP8033	0.1
TP8034	0.1
TP8035	0
TP8036	-
TP8037	3.4
TP8038	0
TP8401	0.5
TP8402	1.2
TP8403	0.4
TP8404	0.5
TP8405	0.5
TP8406	0.6
TP8407	0
TP8408	0
TP8409	0.4
TP8410	1.2
TP8411	1.5
TP8412	0
TP8416	0
TP8504	0
TP8505	1.6
TP8506	3.3
TP8507	3.1

MODE / PIN NO.	STOP
TP8508	3.3
TP8509	0
TP8510	1.7
TP8511	2.6
TP8512	2.6
TP8519	6.0
TP8520	6.0
TP8521	0
TP8522	12.0
TP8523	5.1
TP8801	1.6
TP8802	1.6
TP8803	0
TP8804	1.6
TP8805	2.2
TP8806	1.6
TP8807	1.6
TP8809	1.8
TP8810	4.7
TP8811	1.4
TP8812	3.0
TP8813	3.1
TP8814	3.0
TP8815	3.0
TP8816	3.0
TP8817	3.0
TP8818	3.1
TP8819	3.0
TP8820	1.5
TP8821	3.3
TP8822	3.3
TP8823	6.5
TP8902	5.1
TP8903	5.1
TP8904	5.1
TP8906	0.5
TP8912	2.3
TP8913	2.3
TP8914	2.3
TP8915	2.2
TP8916	2.5
TP8917	2.5
TP8919	2.4
TP8920	2.3
TP8921	2.3
TP8922	2.3
TP8923	2.3

DVD SUB C.B.A.

MODE / PIN NO.	STOP
TP8951	3.3
TP8952	1.5
TP8953	0
TP8954	1.4
TP8955	4.6
TP8956	3.0
TP8957	3.0
TP8958	3.0
TP8959	3.0
TP8960	3.3
TP8961	0

VOLTAGE CHART
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

8 CIRCUIT BOARD LAYOUT

8.1. MAIN C.B.A.

MAIN C.B.A. LSEP2216HA (A,B,C) / LSEP2216HK (F)

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

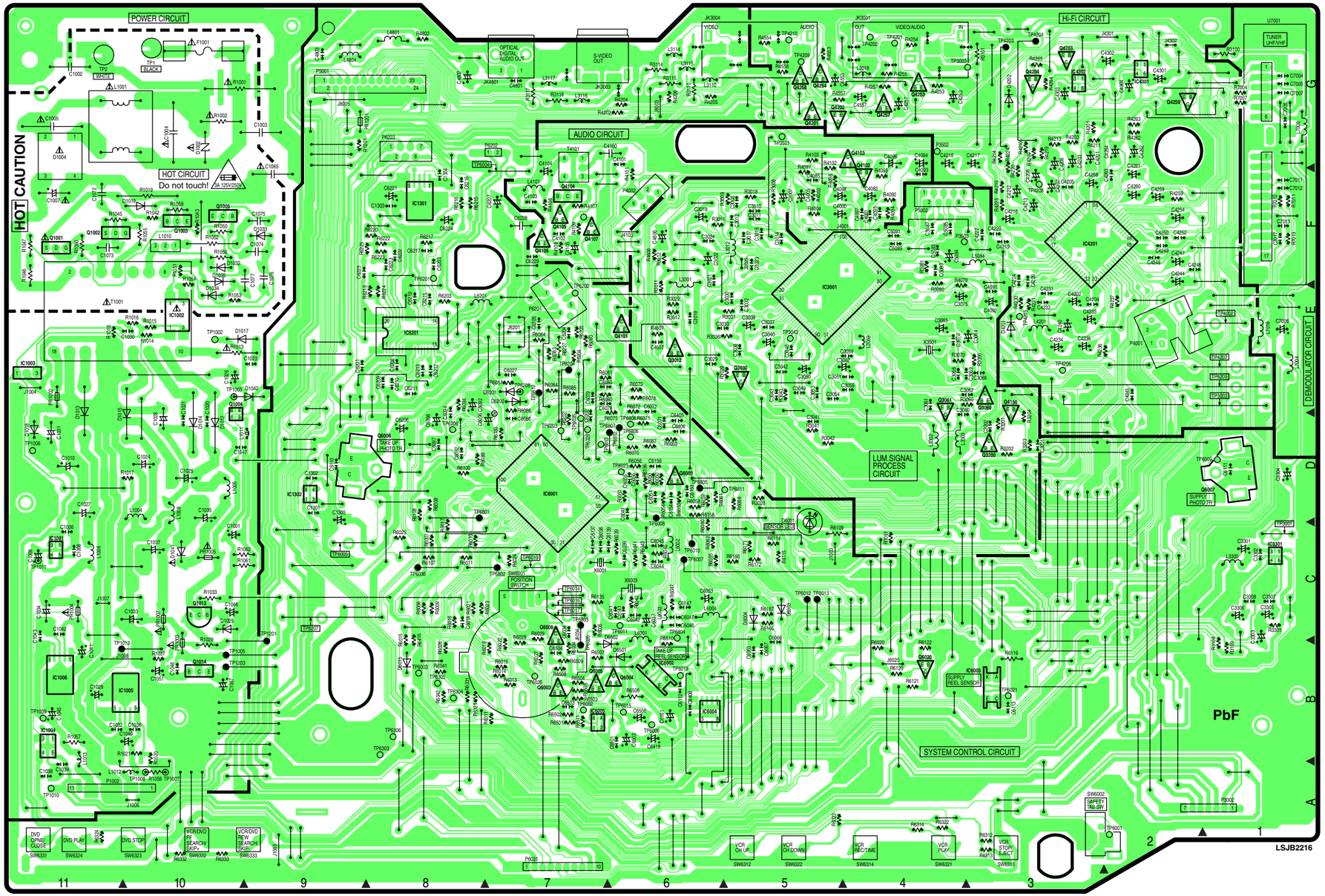
HOT CIRCUIT.BE CAREFUL AND USE AN ISOLATION TRANSFORMER WHEN SERVICING.

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE 3.0A 125V/250V FUSE.
ATTENTION:POUR UNE PROTECTION CONTINUE LES RISQUES D' INCENDIE N' UTILISERQUE DES FUSIBLE DE MÉME TYPE 3.0A 125V/250V

3.0A 125V/250V

IMPORTANT SAFETY NOTICE:
COMPONENTS IDENTIFIED BY THE SIGN ⚠ HAVE SPECIAL CHARACTERISTICS IMPORTANT FOR SAFETY. WHEN REPLACING ANY OF THESE COMPONENTS, USE ONLY THE SPECIFIED PARTS.

NOTE:
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS. FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING, PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.
NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.



COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G

MAIN C.B.A. LSEP2216HA/LSEP2216HK
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

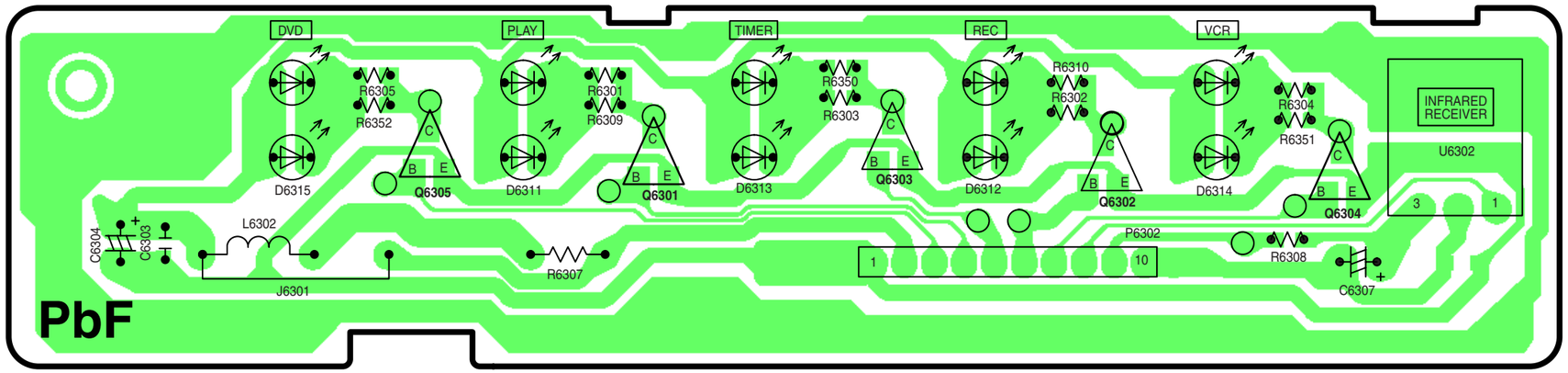
8.2. OPERATION LED C.B.A./ FRONT JACK C.B.A.

OPERATION LED C.B.A. LSEP2230HA

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

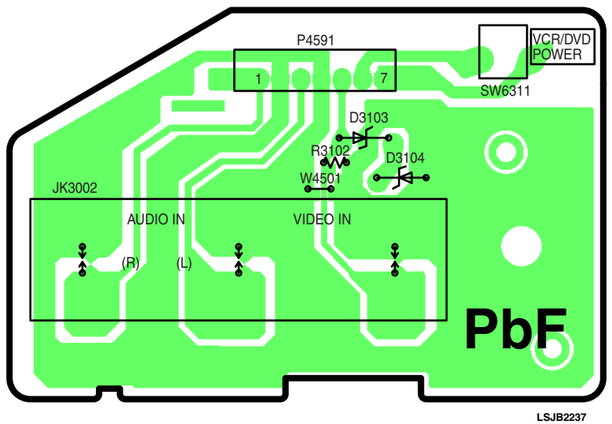
NOTE:
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS.
FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING,
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.



LSJB2230

FRONT JACK C.B.A. LSEP2237HA



LSJB2237

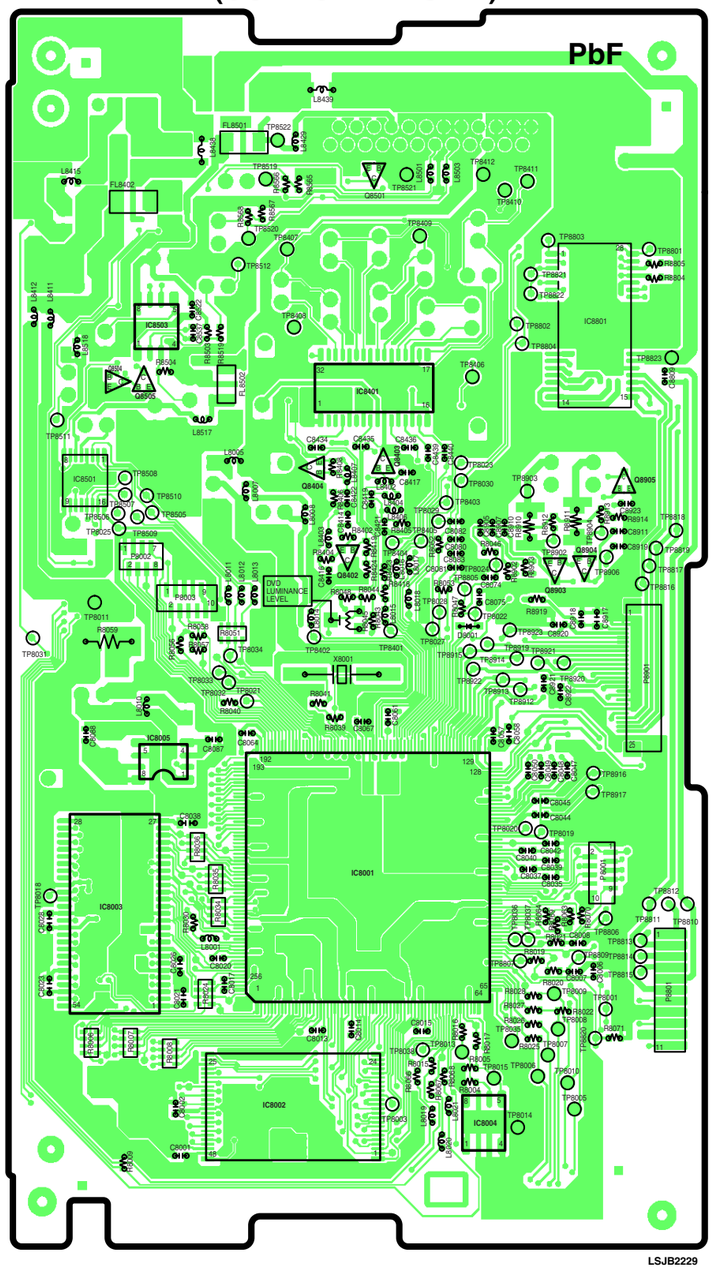
NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES,
REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS.
FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING,
PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.
NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.

8.3. DVD MAIN C.B.A./ DVD SUB C.B.A.

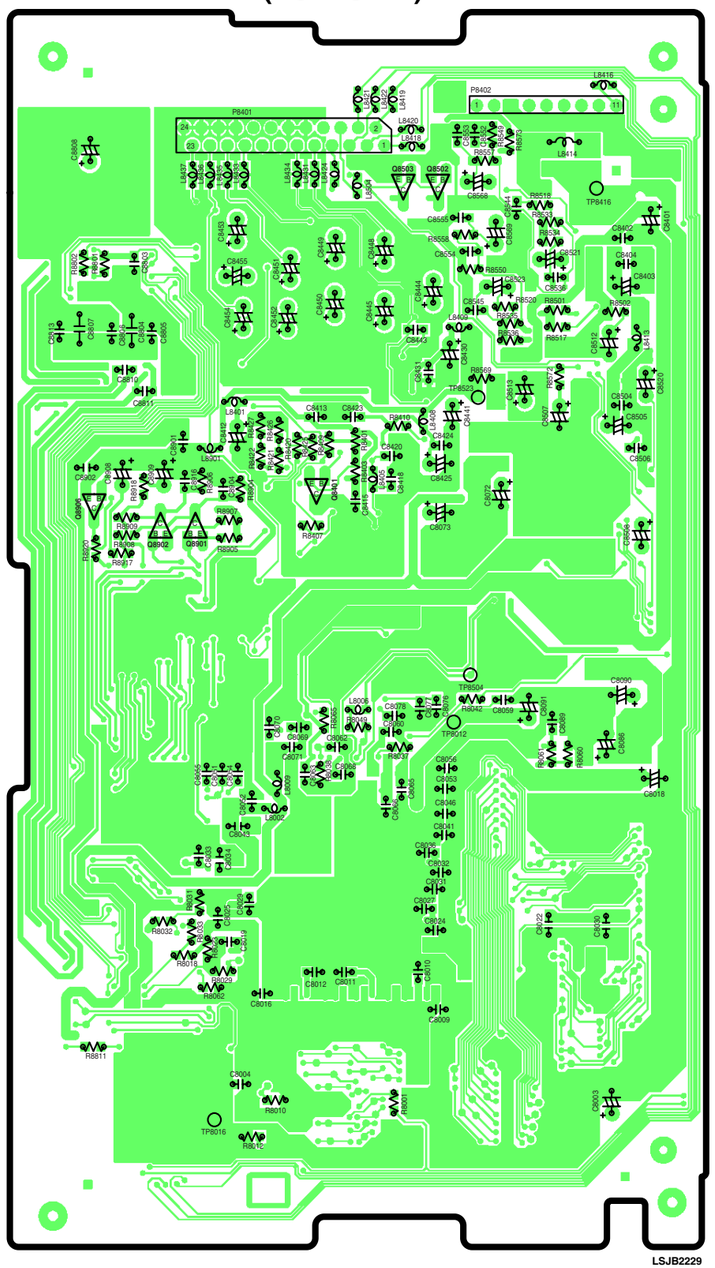
DVD MAIN C.B.A. LSEP2229B (A) / LSEP2229C (B,C,F)

(COMPONENT SIDE)



LSJB2229

(FOIL SIDE)



LSJB2229

NOTE:
FOR SCHEMATIC DIAGRAM AND CIRCUIT BOARD LAYOUT NOTES, REFER TO BEGINNING OF SCHEMATIC SECTION.

NOTE:
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS. FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING, PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.

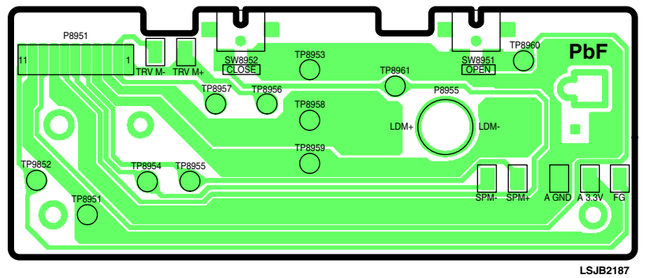
COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G

DVD SUB C.B.A. LSEP2187A

NOTE:
CIRCUIT BOARD LAYOUT SHOWS COMPONENTS INSTALLED FOR VARIOUS MODELS. FOR PROPER PARTS CONTENT FOR THE MODEL YOU ARE SERVICING, PLEASE REFER TO THE SCHEMATIC DIAGRAM AND PARTS LIST.

NOTE:
CIRCUIT BOARD LAYOUT INCLUDES COMPONENTS WHICH ARE NOT USED.

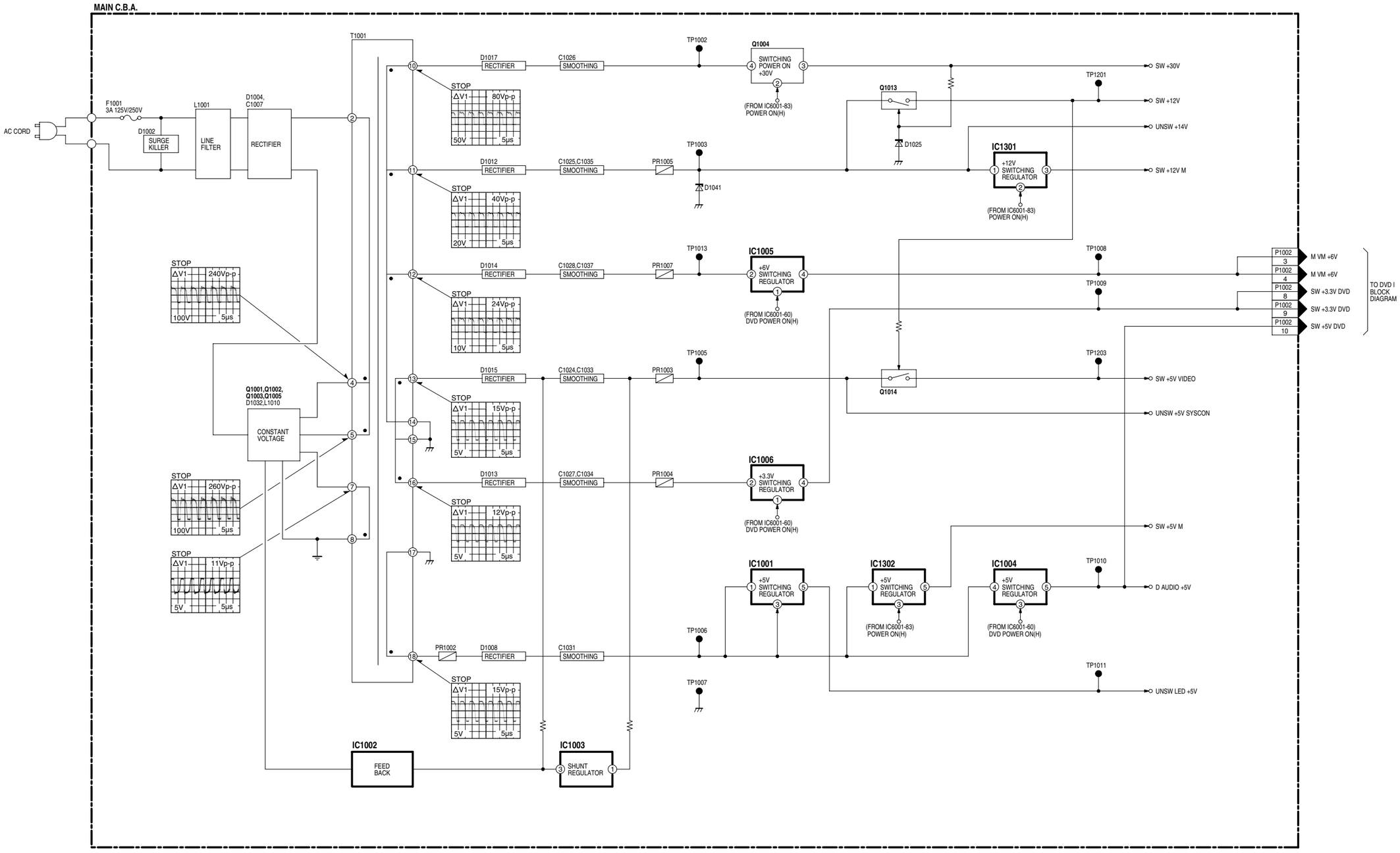


LSJB2187

DVD SUB C.B.A. LSEP2187A
DVD MAIN C.B.A. LSEP2229B/LSEP2229C
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

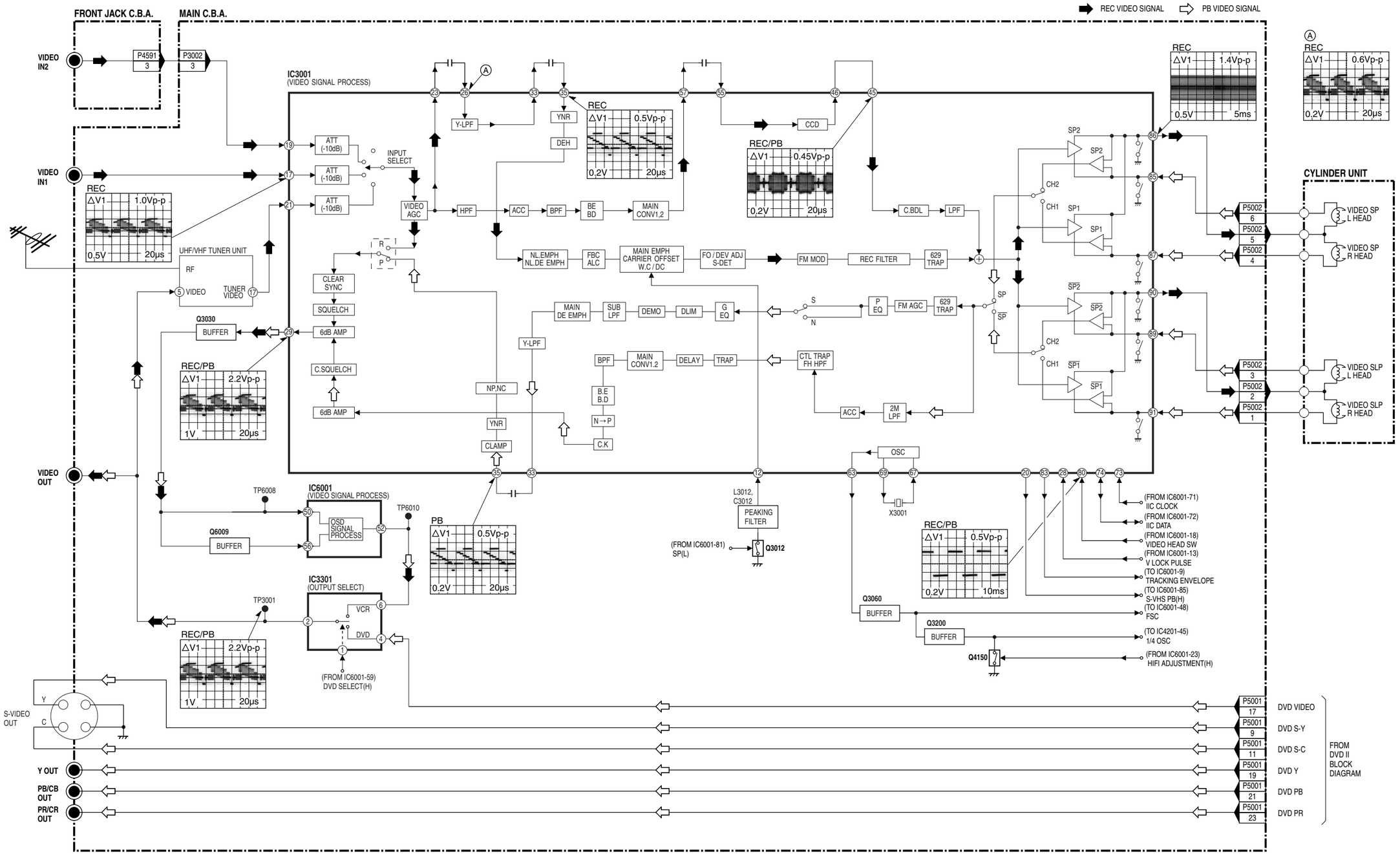
9 BLOCK DIAGRAMS

POWER SUPPLY BLOCK DIAGRAM



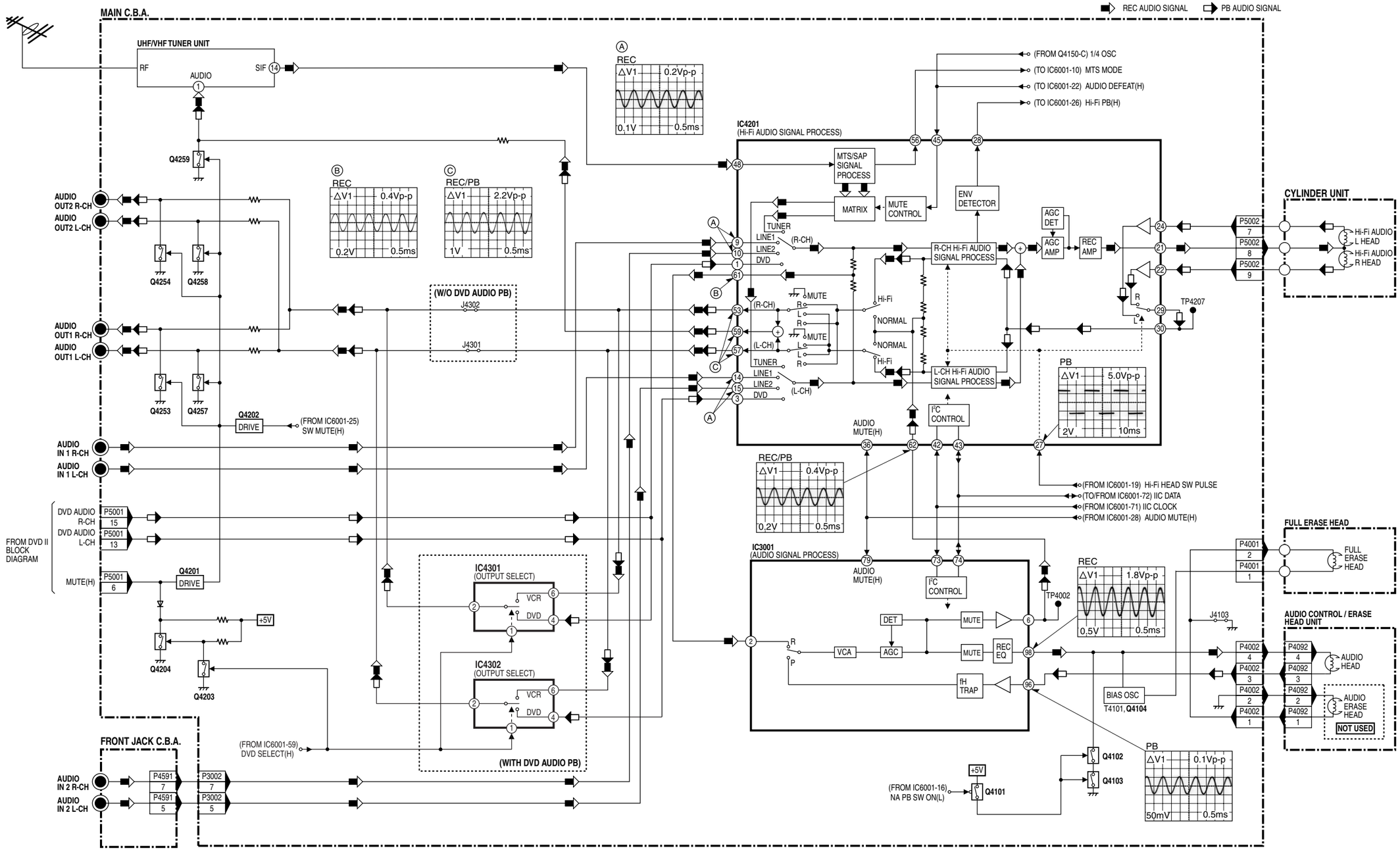
POWER SUPPLY BLOCK DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

VIDEO SIGNAL PATH BLOCK DIAGRAM



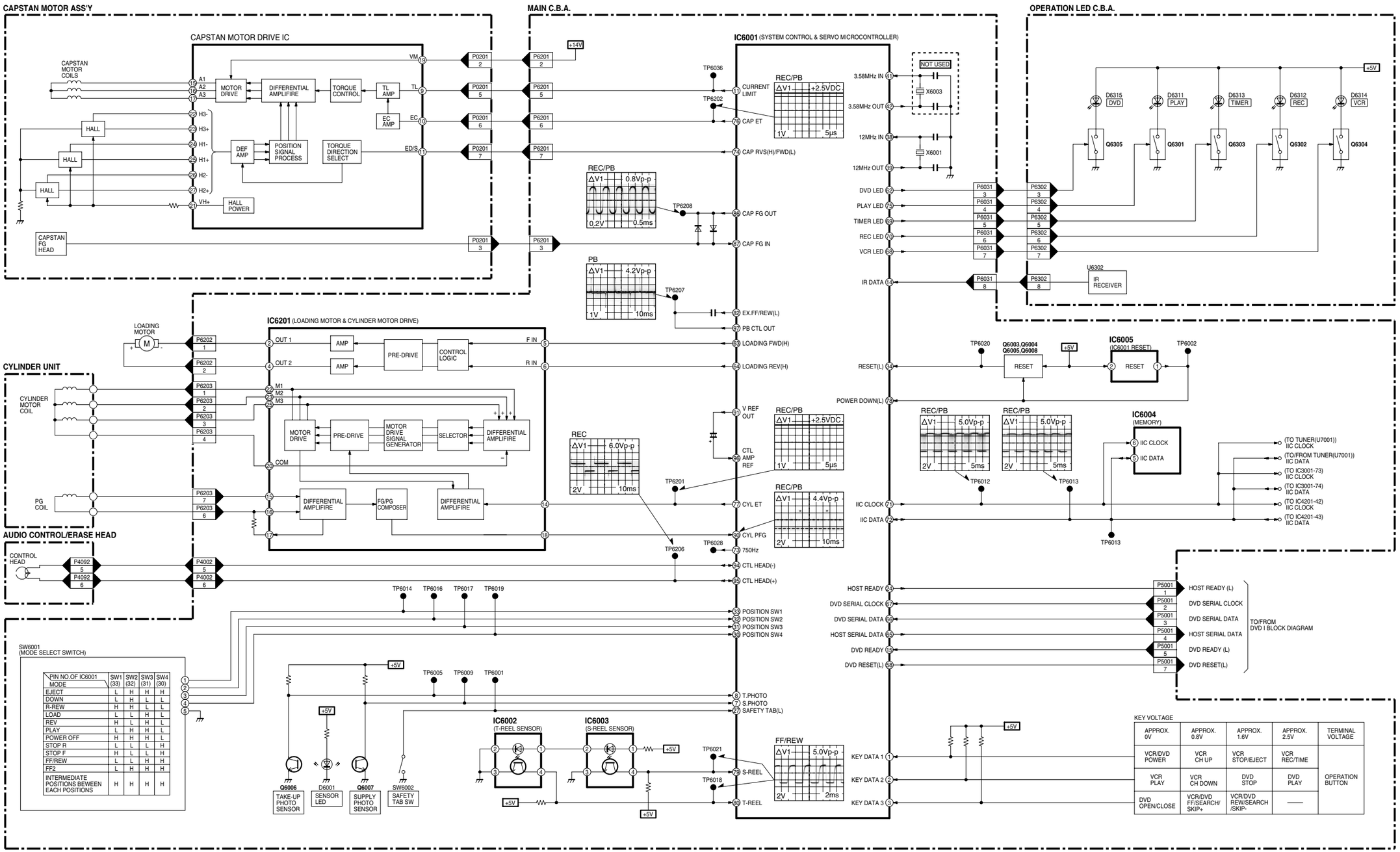
VIDEO SIGNAL PATH BLOCK DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

AUDIO SIGNAL PATH BLOCK DIAGRAM



AUDIO SIGNAL PATH BLOCK DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

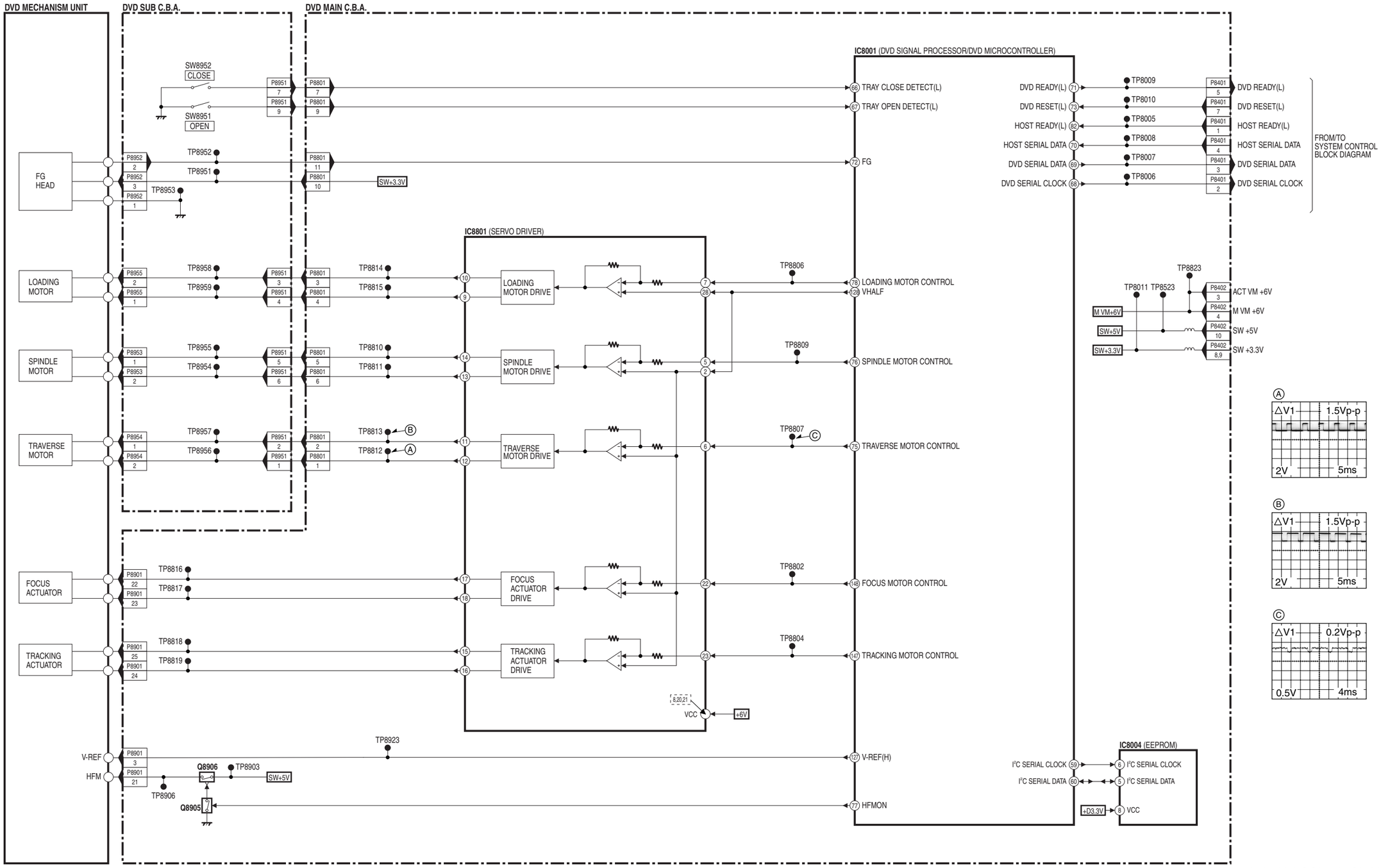
SYSTEM CONTROL / SERVO BLOCK DIAGRAM



PIN NO.OF IC6001 / MODE	SW1 (33)	SW2 (32)	SW3 (31)	SW4 (30)
EJECT	L	H	H	H
DOWN	L	H	L	L
R-REW	H	H	L	L
LOAD	L	L	H	L
REV	H	L	H	L
PLAY	L	H	H	L
POWER OFF	H	H	H	L
STOP R	L	L	L	H
STOP F	H	L	L	H
FF/REW	L	L	H	H
FF2	L	H	H	H
INTERMEDIATE POSITIONS BEWEEN EACH POSITIONS	H	H	H	H

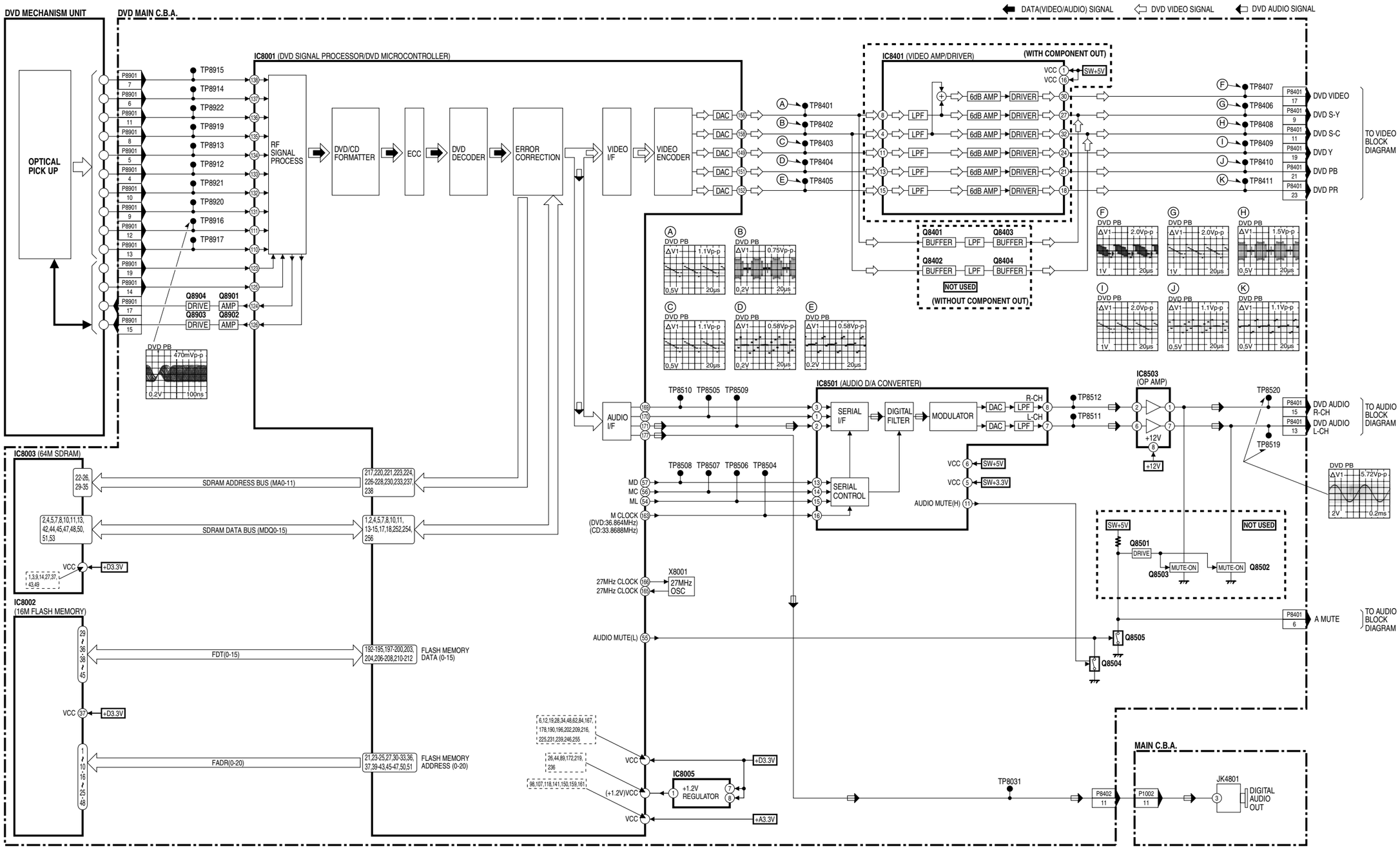
SYSTEM CONTROL / SERVO BLOCK DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

DVD I BLOCK DIAGRAM



DVD I BLOCK DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

DVD II BLOCK DIAGRAM



DVD II BLOCK DIAGRAM
PV-D4735S/PV-D4745/PV-D4745S/PV-D4745S-K

Troubleshooting Hints

How to confirm whether DVD circuit or other circuits is defective.

NOTE:
Host communication may not occur correctly between IC6001 on the Main C.B.A. and IC8001 on the DVD Main C.B.A. when there is a problem on the DVD Main C.B.A.
(Serial Data Communication failure between IC6001 and IC8001 within 30sec. IC6001 will switch automatically to VCR.)
(Check the VCR mode indicator and DVD mode indicator on the Front Light-up Indicators.)
Check the voltage during the 30 seconds during which the unit remains in DVD mode.

1) Confirm DVD operation and VCR operation

1. Playback a VHS tape.
2. Playback a DVD disc.

Both NG → Main C.B.A. is defective. Repair the Main C.B.A.

No PB VCR only → Main C.B.A. is defective. Repair the Main C.B.A.

No PB DVD only →

First, confirm that the Main C.B.A. is O.K. other than DVD Mechanism Unit and DVD Main C.B.A. by referring to "Communication Timing Chart 1," and "Communication Timing Chart 2."
Check points:
1. All Power Supply Voltages for DVD circuit (TP8011 (SW_+3.3V_DVD), TP8523 (SW_+5V_DVD), TP8823 (M_VM_+6V / ACT_VM_+5V) on the DVD Main C.B.A.)
2. Output Signal from DVD Main C.B.A.(TP8009 (D_RDY)), Output Signal from Main C.B.A.(TP8005 (H_RDY)) (TP8009 (D_RDY), TP8005 (H_RDY) on the DVD Main C.B.A.)

NG → Main C.B.A. is defective. Repair the Main C.B.A.

OK ↓

DVD circuit is defective.
Perform troubleshooting referring to "How to confirm whether DVD Mechanism Unit or DVD Main C.B.A. is defective."

How to confirm whether DVD Mechanism Unit or DVD Main C.B.A. is defective.

Confirm communication between DVD Main C.B.A. and Main C.B.A. by referring to "Communication Timing Chart 2."
Check points:
1. Output Signal from DVD Main C.B.A. (TP8006 (DVD_SCK) on the DVD Main C.B.A.)

NG → DVD Main C.B.A. is defective. Repair the DVD Main C.B.A.
IC8001 or the circuit around it is defective.

OK ↓

Confirm that the OPEN/CLOSE TRAY works correctly.

NG → DVD Mechanism Unit or IC8801 is defective. Repair it by referring to the "Tray Operation Problem. "

OK ↓

Playback the test DVD disc.

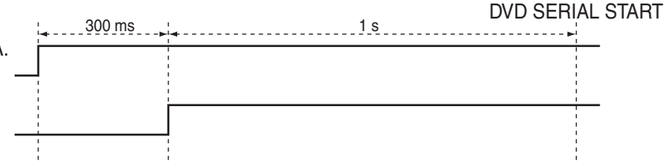
The Message "PLEASE CHECK THE DISC, AND FOR STAINS OR SCRATCHES ON DISC" appears. →

DVD Mechanism Unit or IC8801 or IC8001 is defective. Repair it referring to "Spindle Motor Operation Problem," and " Traverse Operation Problem," "Cause: Pickup Problem."

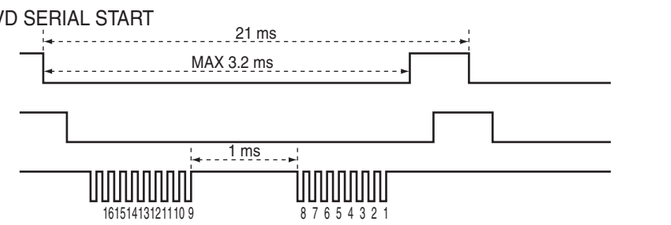
If there is problem with audio or picture, even though it plays back. →

DVD Main C.B.A. is defective. Repair DVD Main C.B.A.

Communication Timing Chart 1



Communication Timing Chart 2


DVD SERIAL START
21 ms
MAX 3.2 ms
TP8005 on the DVD Main C.B.A. (H_RDY (VCR → DVD)
TP8009 on the DVD Main C.B.A. (D_RDY (DVD → VCR)
1 ms
TP8006 on the DVD Main C.B.A. (DVD_SCK (DVD → VCR)
16 15 14 13 12 11 10 9
8 7 6 5 4 3 2 1

Troubleshooting Hints of DVD Mechanism Unit

Tray Operation Problem

Check the voltage at TP8958 on the DVD Sub C.B.A.
During Stop: 1.65V
During Loading: 1.3V
During Unloading: 1.9V

OK → DVD Mechanism Unit is defective. Replace the DVD Mechanism Unit.

NG ↓

Check the voltage at TP8806 (TRAYIN) on the DVD Main C.B.A.
During Stop: 2.5V
During Loading: 1.3V
During Unloading: 3.8V

OK → IC8801 on the DVD Main C.B.A. is defective. Replace IC8801 on the DVD Main C.B.A.

NG ↓

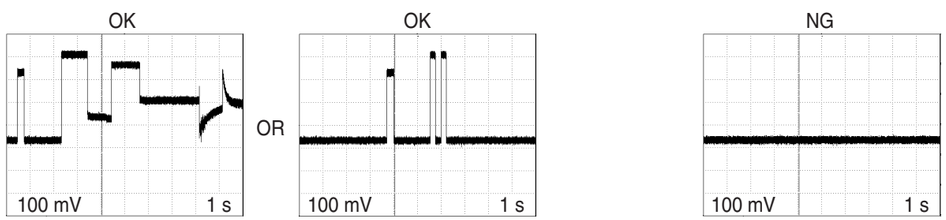
IC8001 on the DVD Main C.B.A. is defective. Replace IC8001 on the DVD Main C.B.A.

Spindle Motor Operation Problem

Note: Check the signal at TP8809 as soon as disc has been inserted. Otherwise, following waveform can not be monitored.

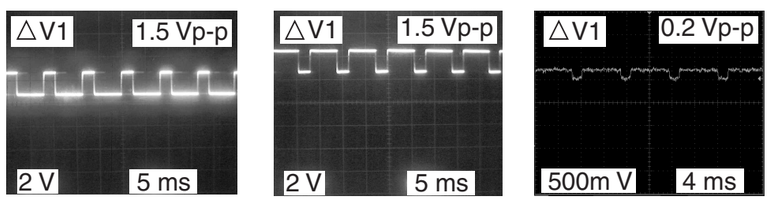
Check the signal at TP8809 (SPIN) on the DVD Main C.B.A.
→ NG → IC8001 on the DVD Main C.B.A. is defective. Replace IC8001 on the DVD Main C.B.A.
↓ OK
Replace IC8801 on the DVD Main C.B.A.
↓ Still NG
DVD Mechanism Unit is defective. Replace the DVD Mechanism Unit.

Signal at TP8809



Traverse Operation Problem

Check the signal at TP8813 and TP8812 on the DVD Main C.B.A.
→ OK → DVD Mechanism Unit is defective. Replace the DVD Mechanism Unit.
↓ NG
Check the signal at TP8807 (TRVIN) on the DVD Main C.B.A.
→ OK → IC8801 on the DVD Main C.B.A. is defective. Replace IC8801 on the DVD Main C.B.A.
↓ NG
IC8001 on the DVD Main C.B.A. is defective. Replace IC8001 on the DVD Main C.B.A.

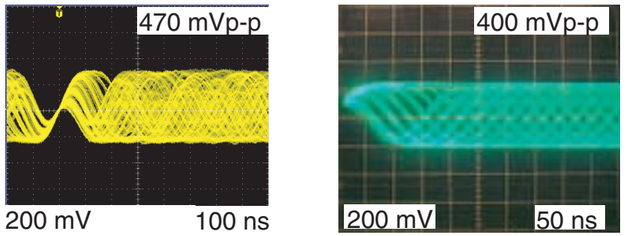


Pickup Operation Problem

Note: Check the voltage during 10 to 20 seconds as soon as disc has been inserted.

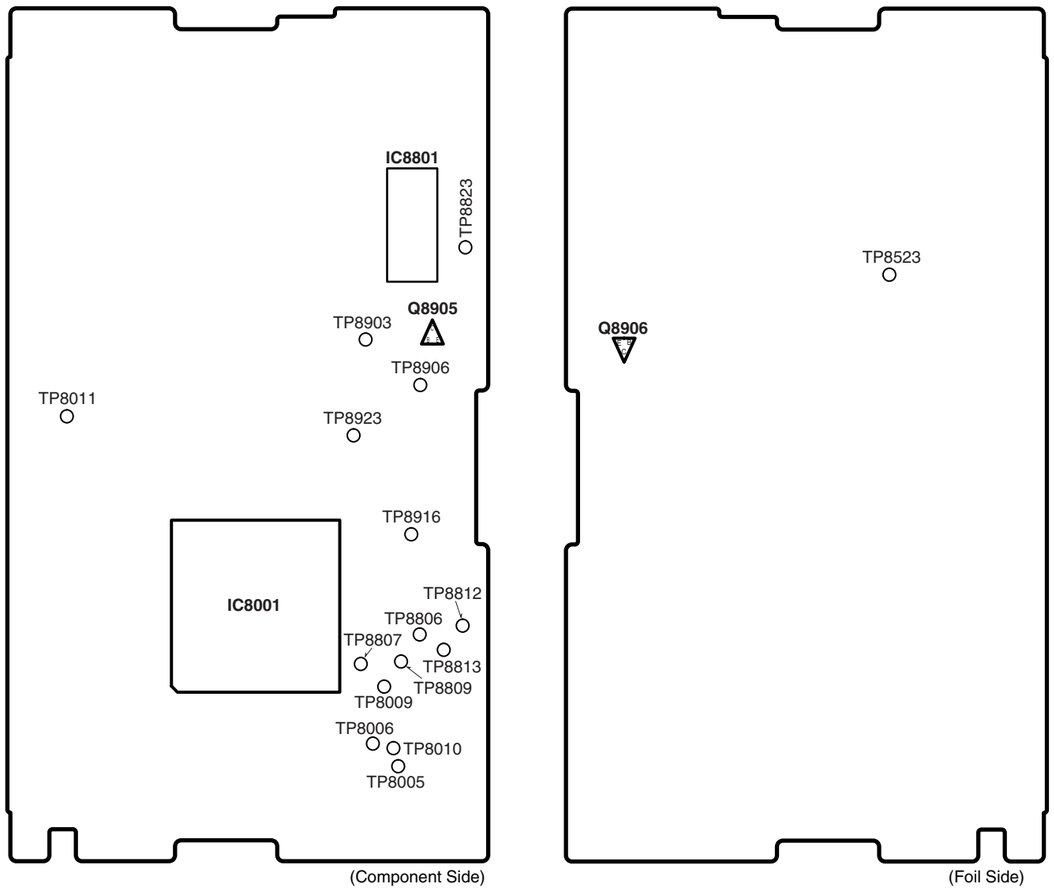
Check the voltage at TP8903 on the DVD Main C.B.A. Is it +5.0 V ?
→ NG → Repair the around circuit of "SW_+5V_DVD" line.
↓ OK
Check the voltage at TP8923 on the DVD Main C.B.A. Is it +2.2 V ?
→ NG → Replace the IC8001 on the DVD Main C.B.A.
↓ OK
Check the voltage at TP8906 on the DVD Main C.B.A. Is it +5.0 V ?
→ NG → Check the voltage at Q8905 (Base) on the DVD Main C.B.A. Is it +3.3 V ?
  → NG → Replace the IC8001 on the DVD Main C.B.A.
  → OK → Replace the Q8905 and Q8906 on the DVD Main C.B.A.
↓ OK
Confirm Wave form at TP8916 from normal DVD Movie or CD.
→ NG → DVD Mechanism Unit is defective. Replace the DVD Mechanism Unit.
↓ If the Message "PLEASE CHECK THE DISC, AND FOR STAINS OR SCRATCHES ON DISC" appears.
IC8001 on the DVD Main C.B.A. is defective. Replace IC8001 on the DVD Main C.B.A.

RF Signal at TP8916

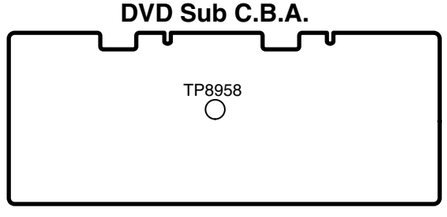


TEST POINTS LOCATION

DVD Main C.B.A.



DVD Sub C.B.A.



Test Point Information

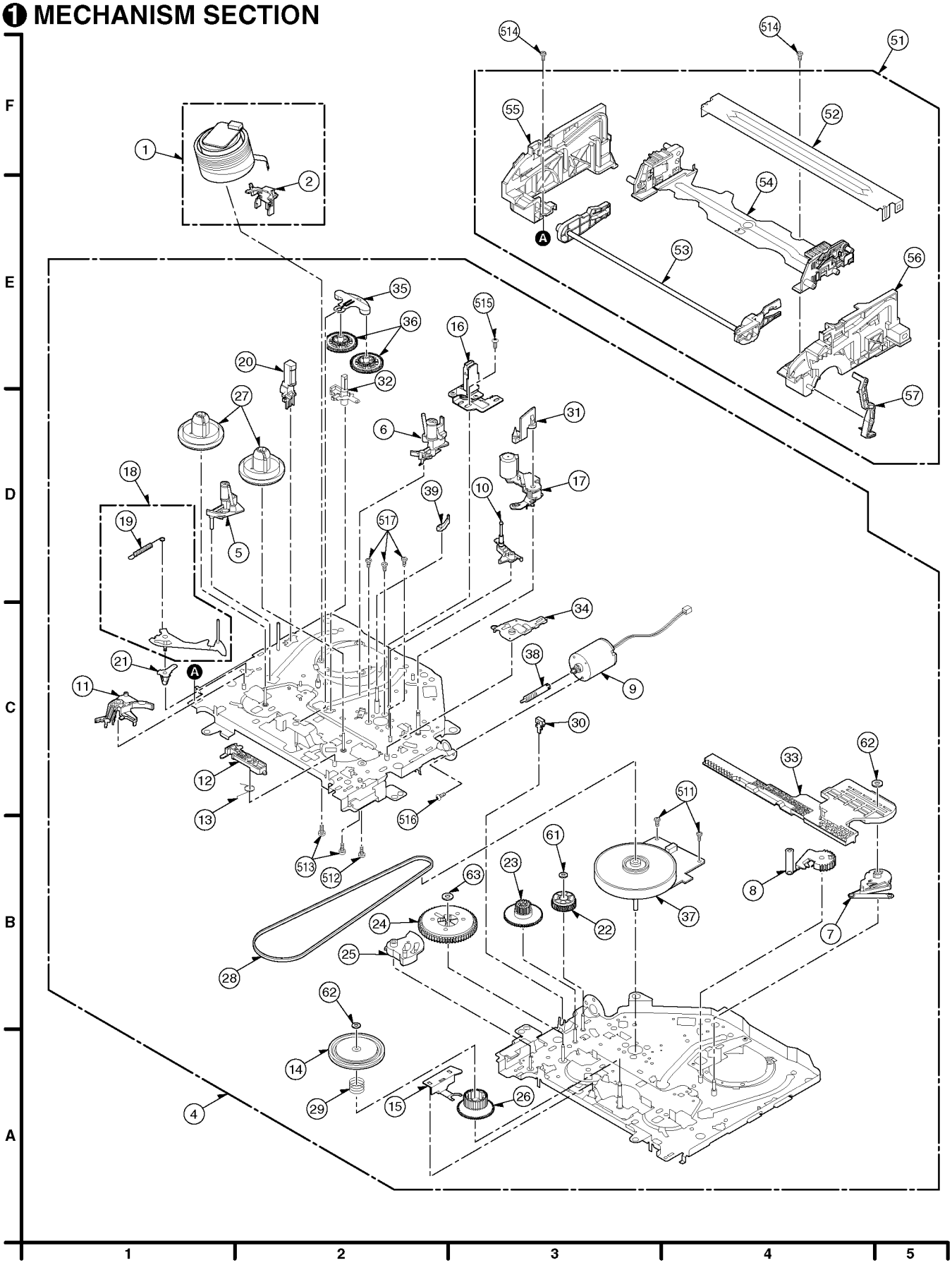
● Test Point with a Test Pin.

○ Test Point with no Test Pin.

10 EXPLODED VIEWS

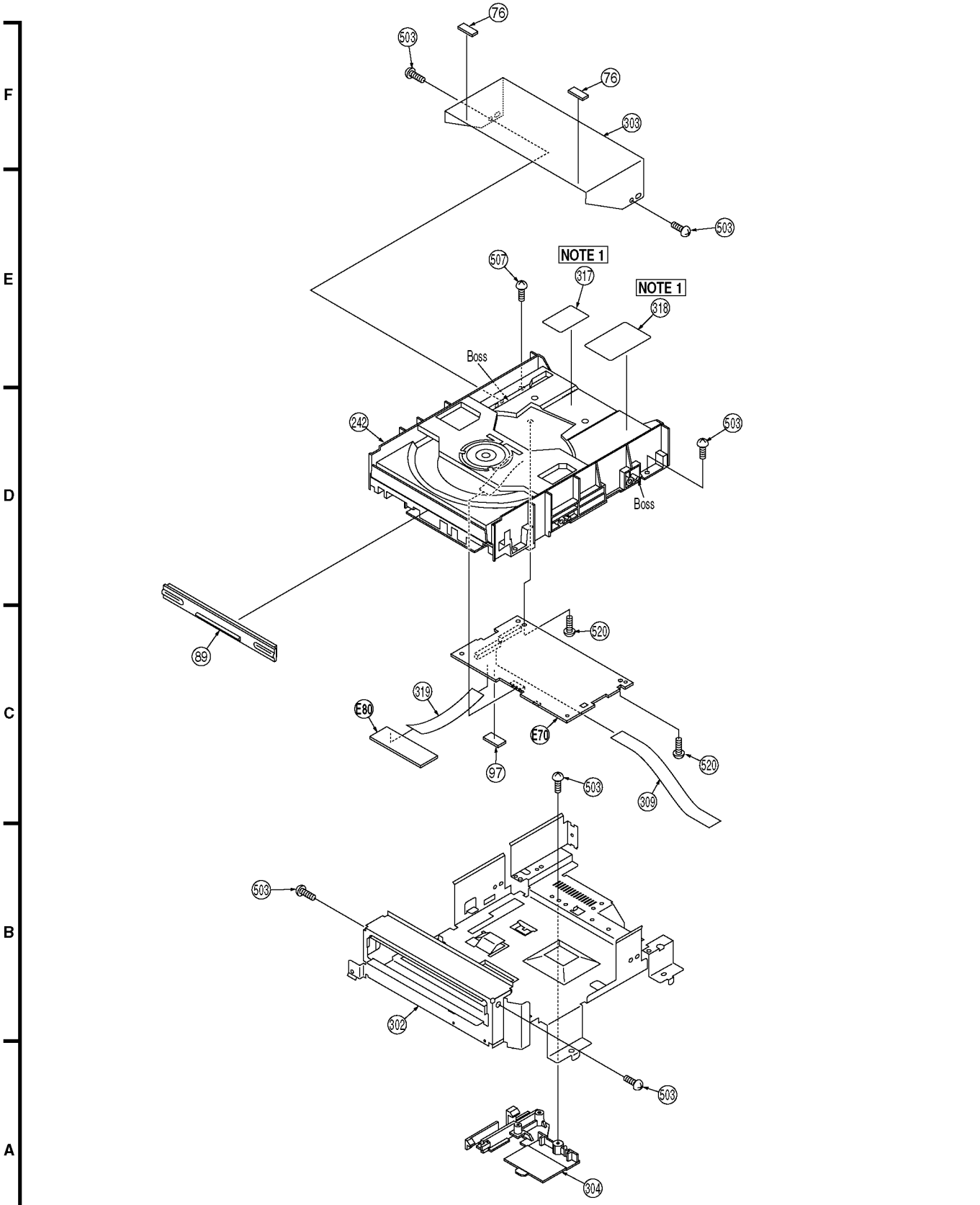
10.1. MECHANISM SECTION

❶ MECHANISM SECTION



10.2. DVD SECTION

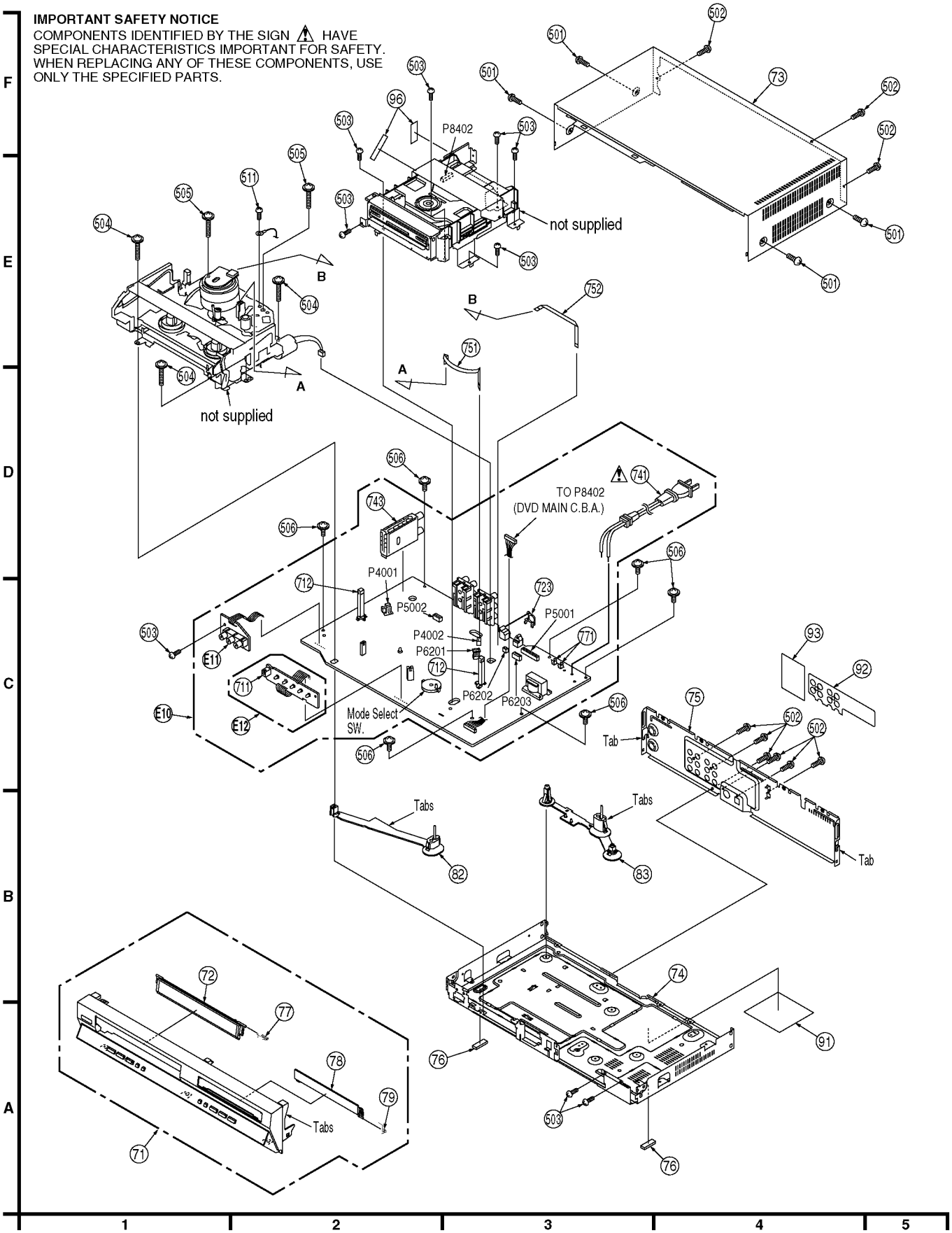
❷ DVD SECTION



NOTE 1: When replacing the DVD Mechanism Unit (Ref. No. 242), be sure to place the Rating Label (Ref. No. 317,318) on it.

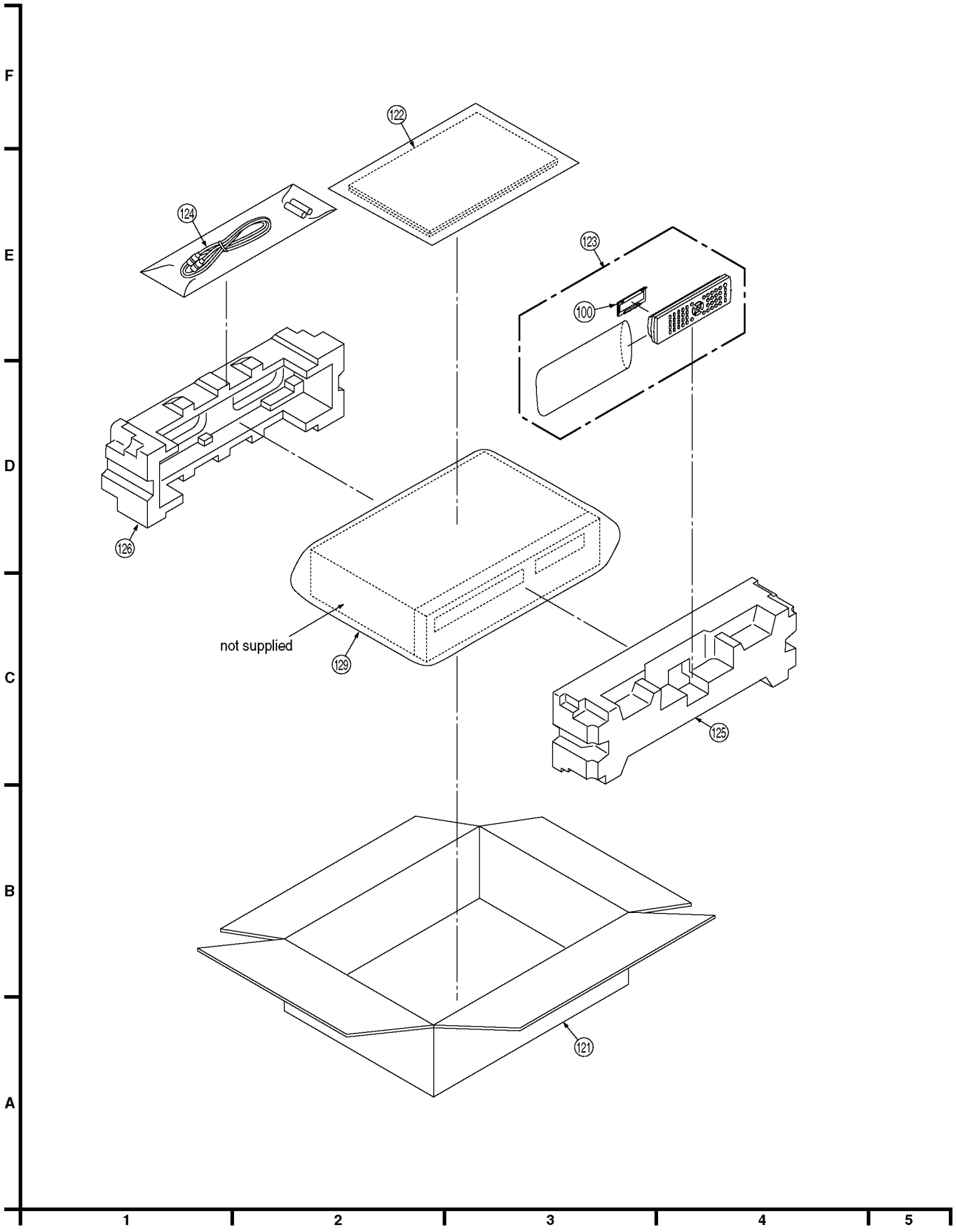
10.3. CHASSIS FRAME AND CASING PARTS SECTION

❸ CHASSIS FRAME AND CASING PARTS SECTION



10.4. PACKING PARTS AND ACCESSORIES SECTION

❹ PACKING PARTS AND ACCESSORIES SECTION



11 REPLACEMENT PARTS LISTS

BEFORE REPLACING PARTS, READ THE FOLLOWING:

11.1. REPLACEMENT NOTES

11.1.1. General Notes

1. Use only original replacement parts:

   To maintain original function and reliability of repaired units, use only original replacement parts which are listed with their part numbers in the parts list.

2. IMPORTANT SAFETY NOTICE

   Components identified by the sign ⚠ have special characteristics important for safety. When replacing any of these components, use only the specified parts.

3. SPECIAL NOTE

   All integrated circuits and many other semiconductor devices are electrostatically sensitive and therefore require the special handling techniques described under the “ELECTROSTATICALLY SENSITIVE (ES) DEVICES” section of this service manual.

4. Parts with no Ref. No. in "EXPLODED VIEWS" are not supplied. And some Ref. No. will be skipped. Be sure to make your orders of replacement parts according to the parts list.

5. Parts different in shape or size may be used. However, only interchangeable parts will be supplied as service replacement parts.

6. Definition of Parts supplier:

   a. Parts with mark “SPC” in the Remarks column are supplied from Spare Parts Center of Panasonic AVC Company.

   b. Parts with mark "MKE" in the Remarks column are supplied from MKE.

   c. Parts without mark in the Remarks column are supplied from MKI.

7. Item numbers with capital letter E (Example: E10, E20, ...) in the Ref. No. column are shown in the exploded views.

8. Parts whose Ref. Nos. are the same are interchangeable as replacement parts. Any of these parts may be ordered and used as a replacement part.

11.1.2. Mechanical Replacement Notes

1. Section No. of parts shown in Exploded Views are indicated in the Remarks column.

2. The Mechanical Chassis Sub Ass’y (Ref. No. 4) consists of all the mechanical parts except the Cylinder Kit (Ref. No. 1) and the Cassette Up Ass’y (Ref. No. 51).

   After replacing the Mechanical Chassis Sub Ass’y, be sure to perform “TAPE INTERCHANGEABILITY ADJUSTMENT” in Service Manual for R4-Mechanism Chassis for PV-Model (Order No. MKE0401000C1).

3. Cylinder is supplied as a Cylinder Kit (Ref. No. 1) only. Cylinder Kit consists of a Cylinder and a Main FPC Holder (Ref. No.2). However, FPC Holder (Ref. No.2) is available separately as a replacement part.

4. The Infrared Remote Control Unit (Ref. No. 123) replacement part is available as a complete assembly unit only. Do not try to disassemble the Infrared Remote Control Unit.

5. FPC Holder (Ref. No. 2) is not reusable. If removed, install a new one.

11.1.3. Electrical Replacement Notes

1. Unless otherwise specified;

   All resistors are in Ω, K = 1,000 Ω, M = 1,000 kΩ.

2. Abbreviation

RTL:	Retention Time Limited This indicates that the retention time is limited for this item. After the discontinuation of this item in production, it will no longer be available.
NR	Non Repairable Board Ass’y
MGF CHIP:	Metal Glaze Film Chip
C CHIP:	Ceramic Chip
COMPLX CMP:	Complex Component
W FLMPRF:	Wirewound Flameproof
C.B.A.:	Circuit Board Assembly
P.C.B.:	Printed Circuit Board
E.S.D.:	Electrostatically Sensitive Devices

3. When replacing 0 .resistor, a wire can be substituted for it.

4. Since the UHF/VHF TUNER/TV DEMODULATOR UNIT (Ref. No. 743) has already been pre-adjusted at the factory, do not try to adjust the UHF/VHF TUNER/TV DEMODULATOR UNIT. The UHF/VHF TUNER/TV DEMODULATOR UNIT replacement part is available as a complete assembly unit only.

5. EEP ROM IC (IC6004), MAIN C.B.A. replacement note:

   After replacing EEP ROM IC (IC6004) or MAIN C.B.A., be sure to perform the “PG SHIFTER ADJUSTMENT” in ELECTRICAL ADJUSTMENT procedures.

11.2. MECHANICAL REPLACEMENT PARTS LIST

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G

Definition of Parts supplier:

1. **Parts with mark "SPC" in the Remarks column are supplied from Spare Parts Center of Panasonic AVC Company.**
2. **Parts with mark "MKE" in the Remarks column are supplied from MKE.**
3. **Parts without mark in the Remarks column are supplied from MKI.**

MECHANICAL REPLACEMENT PARTS

Ref. No.	Part No.	Part Name & Description	Remarks
1	LSVD0010	CYLINDER KIT	1
2	VMD4983	FPC HOLDER	1
4	LSXY0542	MECHANICAL CHASSIS SUB ASS´Y	1
5	VXA7105	SUPPLY SHAFT HOLDER UNIT	1
6	VXA7106	TAKE UP SHAFT HOLDER UNIT	1
7	VXL3107	SUPPLY LOADING ARM UNIT	1
8	VXL3108	TAKE UP LOADING ARM UNIT	1
9	VEM0796	LOADING MOTOR UNIT	1
10	VXL3110	P5 ARM UNIT	1
11	VXL3112	SUPPLY BRAKE ARM UNIT	1
12	VXL3121	TAKE UP BRAKE ARM UNIT	1
13	VMB3548	TAKE UP BRAKE SPRING	1
14	VXP2133	CENTER CLUTH UNIT	1
15	VXL3124	CHANGING LEVER UNIT	1
16	LSEH0008	AUDIO CONTROL/ERASE HEAD UNIT	1
17	VXL3109	PINCH ARM UNIT	1
18	VXL3111	TENSION ARM UNIT	1
19	VMB3547	TENSION SPRING	1
20	L1AZ00000004	FULL ERASE HEAD	1
21	VDB1431	TENSION ARM BOSH	1
22	VXP2168	TORQUE CLUTCH UNIT	1
23	VDG1510	INTERMEDIATE GEAR	1
24	VDG1511	MAIN CAM GEAR	1
25	VXA7311	SECTOR GEAR UNIT	1
26	VDG1514	CHANGE GEAR	1
27	VDR0372	REEL TABLE	1
28	VDV0391	CAPSTAN BELT	1
29	VMB3550	CHANGING GEAR SPRING	1
30	VMD4987	WORM BEARING	1
31	VMD4252	OPENER PIECE	1
32	VMD4253	LED PRISM	1
33	VML3624	MAIN LEVER	1
34	VML3626	PINCH CHARGE ARM	1
35	VML3632	IDLER ARM	1
36	VDG1512	IDLER GEAR	1
37	VEM0800	CAPSTAN ASS´Y	1
38	VDG1637	WORM GEAR	1
39	VMX3377	P4 CAP	1
51	VXA7108	CASSETTE UP ASS´Y	1
52	VMA0L25	TOP PLATE	1
53	VXL3160	MAIN SHAFT UNIT	1
54	VXA7110	CASSETTE HOLDER UNIT	1
55	VMD4255	SIDE PLATE L	1
56	VMD4254	SIDE PLATE R	1
57	VML3706	OPENER LEVER	1
61	VMX2208	WASHER,NYLON	1
62	VMX3196	WASHER,NYLON	1
63	VMX2699	WASHER,NYLON	1
71	VYPS7177	FRONT PANEL ASS´Y (A)	3
71	VYPS7181	FRONT PANEL ASS´Y (B)	3
71	VYPS7178	FRONT PANEL ASS´Y (C,F)	3
72	LSGP0457	CASSETTE DOOR-LID (A,C,F)	3
72	LSGP0458	CASSETTE DOOR-LID (B)	3
73	LSKM1124	TOP PANEL (A,C,F)	3
73	LSKM1125	TOP PANEL (B)	3
74	LSMK0858	BOTTOM COVER	3
75	LSMK0859	REAR COVER	3
76	VKA0364	FOOT	2,3
77	LSMB0310	CASSETTE DOOR SPRING	3
78	LSGP0459	DVD DOOR-LID (A)	3
78	LSGP0464	DVD DOOR-LID (B)	3
78	LSGP0461	DVD DOOR-LID (C,F)	3
79	LSMB0312	DVD DOOR SPRING	3
82	LSMX0204	MECHA SPACER F	3
83	LSMX0205	MECHA SPACER R	3
89	LSGP0381	TRAY COVER	2
91	LSQL1616	CAUTION LABEL	3
92	LSQL1863	INDICATION LABEL	3
93	LSQL1879	LICENSE LABEL	3
96	LSMF0389	NONFABRIC TAPE	3
97	LMMY0030	HEAT SHEET,SI	2
100	EUR77EC2406A	BATTERY COVER	4
121	LSPG1920	PACKING CASE,PAPER (A)	4
121	LSPG1946	PACKING CASE,PAPER (B)	4
121	LSPG1941	PACKING CASE,PAPER (C)	4
121	LSPG1944	PACKING CASE,PAPER (F)	4
122	LSQF0907	FAN BAG (A)	4
122	LSQF0908	FAN BAG (B,C)	4
122	LSQF0935	FAN BAG (F)	4
123	EUR7724KE0R	INFRARED REMOTE CONTROL UNIT (A)	4
123	EUR7724KF0R	INFRARED REMOTE CONTROL UNIT (B,C,F)	4
124	LSJA0418	VHF CONNECTING CABLE W/PLUG,0V	4
125	LSPN0558	FRONT CUSHION,STYROFOAM	4
126	LSPN0559	REAR CUSHION.STYROFOAM	4
129	LSPF0084	SHEET,POLYETHYLENE	4
242	LSXK0227	DVD UNIT	2
302	LSMA0798	DVD ANGLE	2
303	LSSC0792	DVD SHIELD PLATE	2
304	LSGK0182	BARRIER	2
309	LSJW0093	FLEXIBLE FLAT CABLE W/OUT PLUG	2
317	LSQL1907	RATING LABEL 2	2
318	LSQL1856	RATING LABEL (A)	2
318	LSQL1854	RATING LABEL (B,C,F)	2
319	LSJW0091	FLEXIBLE FLAT CABLE W/OUT PLUG	2
501	XTW3+5TFN	SCREW,STEEL (A,C,F)	3
501	XTW3+5TFJK	SCREW,STEEL (B)	3
502	XTV3+8JFJ	SCREW,STEEL	3
503	XTV3+6JFJ	TAPPING SCREW,STEEL	2,3
504	LSHD0104-FJ	SCREW,STEEL	3
505	LSHD0103-FJ	SCREW,STEEL	3
506	XTW3+6TFJ	SCREW,STEEL	3
507	XTV3+10JFJ	TAPPING SCREW,STEEL	2
511	XTV26+5FFJ	TAPPING SCREW,STEEL	1,3
512	VHD1095	SCREW,STEEL	1
513	VHD1117	SCREW,STEEL	1
514	XTV26+8FFJ	TAPPING SCREW,STEEL	1
515	VHD1044	SCREW,STEEL	1
516	XYN3+C4FJ	SCREW,STEEL	1
517	XTN26+7JFJ	SCREW,STEEL	1
520	XTV26+6JFJ	SCREW,STEEL	2
711	PNA4618M14VT	INFRARED RECEIVER UNIT	3
712	VMD4258	PHOTO SENSOR HOLDER	3
723	LSSC0708	S JACK FCC PLATE	3

Ref. No.	Part No.	Part Name & Description	Remarks
741	LSJA0550	AC CORD W/PLUG, AC 120V	3 ⚠
743	ENG56D06G1F	TUNER,UHF/VHF NR	3
751	VWJ1652	FLEXIBLE FLAT CALBE W/OUT PLUG	3
752	VWJ07OW210MM	FLEXIBLE FLAT CABLE W/OUT PLUG	3
771	EYF52BCY	FUSE HOLDER	3
E10	LSEP2216HA	MAIN C.B.A. (A,B,C)	3 RTL
E10	LSEP2216HK	MAIN C.B.A. (F)	3 RTL
E11	LSEP2237HA	FRONT JACK C.B.A.	3 RTL
E12	LSEP2230HA	OPERATION LED C.B.A.	3 RTL
E70	LSUQ0080	DVD MAIN C.B.A. (A)	2 RTL
E70	LSUQ0081	DVD MAIN C.B.A. (B,C,F)	2 RTL
E80	LSEP2187A	DVD SUB C.B.A.	2 RTL

SERVICE FIXTURES AND TOOLS

Ref. No.	Part No.	Part Name & Description	Remarks
	VFMS0003H6	VHS ALIGNMENT TAPE	MKE
	VFKS0081	GREASE	MKE
	VFK0329	POST ADJUSTMENT DRIVER	MKE
	VFK27	HEAD CLEANING STICK	MKE
	VFK0330	H-POSITION ADJUSTMENT DRIVER	MKE
	VFK1301	SILICONE GREAS	MKE
	DVDT-S01	DVD TEST DISC	SPC
	DVDT-S15	DVD TEST DISC	SPC

11.3. ELECTRICAL REPLACEMENT PARTS LIST

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G

Definition of Parts supplier:

1. **All parts are supplied from MKI.**

PRINTED CIRCUIT BOARD ASSEMBLY

Ref. No.	Part No.	Part Name & Description	Remarks
E10	LSEP2216HA	MAIN C.B.A. (A,B,C)	E.S.D. RTL
E10	LSEP2216HK	MAIN C.B.A. (F)	E.S.D. RTL
E11	LSEP2237HA	FRONT JACK C.B.A.	RTL
E12	LSEP2230HA	OPERATION LED C.B.A.	RTL
E70	LSUQ0080	DVD MAIN C.B.A. (A)	E.S.D. RTL
E70	LSUQ0081	DVD MAIN C.B.A. (B,C,F)	E.S.D. RTL
E80	LSEP2187A	DVD SUB C.B.A.	RTL

11.3.1. MAIN C.B.A.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC1001	C0CBCDC00052	IC, LINEAR	
IC1002	CNC1S101RLL1	IC, LINEAR	⚠
IC1003	B1AZKD000001	IC, LINEAR	
or IC1003	C0DAEMB00004	IC, LINEAR	
or IC1003	C0DAEMZ00005	IC, LINEAR	
IC1004	C0CBCDD00012	IC, LINEAR	
IC1005	C0DBZHG00012	IC, LINEAR	
IC1006	C0DBZGG00010	IC, LINEAR	
IC1301	C0DBZJG00007	IC, LINEAR	
IC1302	C0CBCDC00052	IC, LINEAR	
IC3001	C1AB00002002	IC, LINEAR	
IC3301	C1AB00001731	IC, CMOS STANDARD LOGIC	E.S.D.
IC4201	AN3663FBP-V	IC, LINEAR	
IC6001	C2CBHF000400	IC, 16BIT MICROCONTROLLER	E.S.D.
IC6002	B3NAA0000049	PHOTO INTERRUPUTER	
IC6003	B3NAA0000049	PHOTO INTERRUPUTER	
IC6004	C3EBCC000053	IC, 1K EEP ROM	E.S.D.
IC6005	C0EBH0000263	IC, CMOS STANDARD LOGIC	E.S.D.
IC6201	C1AB00001767	IC, LINEAR	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q1001	B1DEEQ000007	TRANSISTOR FET	⚠
Q1002	B1DEEQ000007	TRANSISTOR FET	
Q1003	2SC3311A0A	TRANSISTOR SI NPN CHIP	
or Q1003	B1AACF000092	TRANSISTOR SI NPN CHIP	
or Q1003	B1AACF000095	TRANSISTOR SI NPN CHIP	
Q1004	XP0431100L	TRANSISTOR COMPLX CMP SI PNP/NPN CHIP	
Q1005	2SC3311A0A	TRANSISTOR SI NPN CHIP	
or Q1005	B1AACF000092	TRANSISTOR SI NPN CHIP	
or Q1005	B1AACF000095	TRANSISTOR SI NPN CHIP	
Q1013	B1AAGD000016	TRANSISTOR SI NPN CHIP	
Q1014	2SD235800A	TRANSISTOR SI NPN CHIP	
or Q1014	B1AAQB000002	TRANSISTOR SI NPN CHIP	
Q3012	UNR221300L	TRANSISTOR SI NPN CHIP	
or Q3012	B1GBCFNN0004	TRANSISTOR SI NPN CHIP	
Q3030	2SD0601ASL	TRANSISTOR SI NPN CHIP	
Q3060	2SB0709A0L	TRANSISTOR SI PNP CHIP	
or Q3060	B1ADCC000004	TRANSISTOR SI PNP CHIP	
or Q3060	B1ADCF000001	TRANSISTOR SI PNP CHIP	
or Q3060	B1ADCF000077	TRANSISTOR SI PNP CHIP	
Q3200	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q3200	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q4101	UNR211100L	TRANSISTOR SI PNP CHIP	

Ref. No.	Part No.	Part Name & Description	Remarks
or Q4101	B1GDCFJJ0002	TRANSISTOR SI PNP CHIP	
Q4102	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q4102	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q4103	2SD1819AHL	TRANSISTOR SI NPN CHIP	
or Q4103	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q4105	2SD06020RL	TRANSISTOR SI NPN CHIP	
or Q4105	B1ABGD000012	TRANSISTOR SI NPN CHIP	
or Q4105	2SD0602ARL	TRANSISTOR SI NPN CHIP	
Q4106	2SB0710AHL	TRANSISTOR SI NPN CHIP	
Q4107	UNR221300L	TRANSISTOR SI NPN CHIP	
or Q4107	B1GBCFNN0004	TRANSISTOR SI NPN CHIP	
Q4150	UNR221100L	TRANSISTOR SI NPN CHIP	
or Q4150	B1GBCFJJ0002	TRANSISTOR SI NPN CHIP	
Q4201	UNR511500L	TRANSISTOR SI PNP CHIP	
or Q4201	B1GDCFJA0017	TRANSISTOR SI PNP CHIP	
or Q4201	B1GDCFJJ0025	TRANSISTOR SI PNP CHIP	
Q4202	UNR511500L	TRANSISTOR SI PNP CHIP	
or Q4202	B1GDCFJA0017	TRANSISTOR SI PNP CHIP	
or Q4202	B1GDCFJJ0025	TRANSISTOR SI PNP CHIP	
Q4203	UNR521500L	TRANSISTOR SI NPN CHIP	
Q4204	UNR521500L	TRANSISTOR SI NPN CHIP	
Q4253	UNR521500L	TRANSISTOR SI NPN CHIP	
Q4254	UNR521500L	TRANSISTOR SI NPN CHIP	
Q4257	UNR521500L	TRANSISTOR SI NPN CHIP	
Q4258	UNR521500L	TRANSISTOR SI NPN CHIP	
Q4259	UNR521500L	TRANSISTOR SI NPN CHIP	
Q6003	2SD0601A0L	TRANSISTOR SI NPN CHIP	
or Q6003	B1ABCC000004	TRANSISTOR SI NPN CHIP	
or Q6003	B1ABCF000011	TRANSISTOR SI NPN CHIP	
or Q6003	B1ABCF000106	TRANSISTOR SI NPN CHIP	
Q6004	2SB0709AHL	TRANSISTOR SI PNP CHIP	
or Q6004	B1ADCC000004	TRANSISTOR SI PNP CHIP	
or Q6004	B1ADCF000001	TRANSISTOR SI PNP CHIP	
or Q6004	B1ADCF000077	TRANSISTOR SI PNP CHIP	
Q6005	2SB0709AHL	TRANSISTOR SI PNP CHIP	
or Q6005	B1ADCC000004	TRANSISTOR SI PNP CHIP	
or Q6005	B1ADCF000001	TRANSISTOR SI PNP CHIP	
or Q6005	B1ADCF000077	TRANSISTOR SI PNP CHIP	
Q6006	PNA2604M01VT	PHOTO SENSOR	
Q6007	PNA2604M01VT	PHOTO SENSOR	
Q6008	2SD0601A0L	TRANSISTOR SI NPN CHIP	
or Q6008	B1ABCC000004	TRANSISTOR SI NPN CHIP	
or Q6008	B1ABCF000011	TRANSISTOR SI NPN CHIP	
or Q6008	B1ABCF000106	TRANSISTOR SI NPN CHIP	
Q6009	2SB0709AHL	TRANSISTOR SI PNP CHIP	
or Q6009	B1ADCC000004	TRANSISTOR SI PNP CHIP	
or Q6009	B1ADCF000001	TRANSISTOR SI PNP CHIP	
or Q6009	B1ADCF000077	TRANSISTOR SI PNP CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D1002	ERZV07Z361CS	SURGE ABSORBER	⚠
D1004	B0EDKT000009	DIODE SI	⚠
D1012	B0JANK000003	DIODE SI	
D1013	B0JAME000079	DIODE SI	
or D1013	B0JAME000049	DIODE SI	
or D1013	B0JANE000028	DIODE SI	
D1014	B0JANK000003	DIODE SI	
D1015	B0JAME000079	DIODE SI	
or D1015	B0JAME000049	DIODE SI	
or D1015	B0JANE000028	DIODE SI	
D1017	B0HAHP000014	DIODE SI	
or D1017	B0HAJP000007	DIODE SI	
or D1017	B0HAMP000061	DIODE SI	
D1018	B0JCMD000022	DIODE SI	
D1019	B0HAGM000006	DIODE SI	
D1025	MAZ4130NLF	DIODE ZENER 13V	
D1032	MAZ40360MF	DIODE ZENER 3.6V	
D1033	MA2C165001VT	DIODE SI	
or D1033	B0AACK000004	DIODE SI	
D1034	MA2C165001VT	DIODE SI	
or D1034	B0AACK000004	DIODE SI	
D1035	B0HAHP000014	DIODE SI	
or D1035	B0HAJP000007	DIODE SI	
D1035	B0HAMP000061	DIODE SI	
D1041	MAZ72400AC	DIODE ZENER 24V	⚠
D4201	MA2C165001VT	DIODE SI	
or D4201	B0AACK000004	DIODE SI	
D4202	B0JCMD000022	DIODE SI	
D6001	B3EA00000072	SENSOR LED UNIT	
D6003	MA2C165001VT	DIODE SI	
or D6003	B0AACK000004	DIODE SI	
D6004	MA2C165001VT	DIODE SI	
or D6004	B0AACK000004	DIODE SI	
D6015	MA2C165001VT	DIODE SI	
or D6015	B0AACK000004	DIODE SI	
D6201	MA2C165001VT	DIODE SI	
or D6201	B0AACK000004	DIODE SI	
D6202	MA2C165001VT	DIODE SI	
or D6202	B0AACK000004	DIODE SI	
D6501	MA2C165001VT	DIODE SI	
or D6501	B0AACK000004	DIODE SI	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R1001	D0AF275KA001	CARBON 1/2W 2.7M	⚠
R1002	ERDS1FJ474T	CARBON 1/2W 470K	⚠
R1013	ERQ14AJ100P	FUSE 1/4W 10	
R1014	ERJ6GEYJ222V	MGF CHIP 1/10W 2.2K	
R1015	ERJ6GEYJ221V	MGF CHIP 1/10W 220	
R1016	ERJ6GEYJ102V	MGF CHIP 1/10W 1K	
R1017	D1BD2431A016	CARBON 1/10W 2.43K	
R1018	D0HD222ZA002	CARBON 1/10W 2.2K	
R1019	ERX2SJR27P	METAL FILM 2W 0.27	
R1020	D1BB1242A031	MGF CHIP 12.4K	
R1021	D0HB302ZA002	MGF CHIP 3K	
R1029	ERDS2TJ331	CARBON 1/4W 330	
R1033	ERDS2TJ153	CARBON 1/4W 15K	
R1037	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R1042	ERJ6GEYJ101V	MGF CHIP 1/10W 100	
R1043	ERJ6GEYJ104V	MGF CHIP 1/10W 100K	
R1045	ERDS2TJ102	CARBON 1/4W 1K	

Ref. No.	Part No.	Part Name & Description	Remarks
R1046	ERDS2TJ105T	CARBON 1/4W 1M	
R1047	ERDS2TJ105T	CARBON 1/4W 1M	
R1050	ERDS2TJ272	CARBON 1/4W 2.7K	
R1051	ERJ6GEYJ331V	MGF CHIP 1/10W 330	
R1052	ERG1SJ331P	METAL OXIDE 1W 330	
R1053	ERJ3GEYJ2R2V	CARBON 1/16W 2.2	
R1054	ERJ6GEYJ330V	MGF CHIP 1/10W 33	
R1055	ERDS2TJ101	CARBON 1/4W 100	
R1056	ERDS2TJ222T	CARBON 1/4W 2.2K	
R1057	ERDS2TJ332T	CARBON 1/4W 3.3K	
R1058	ERDS2TJ682T	CARBON 1/4W 6.8K	
R1059	ERDS2TJ102	CARBON 1/4W 1K	
R1060	ERDS2TJ680T	CARBON 1/4W 68	
R1061	ERDS2TJ123T	CARBON 1/4W 12K	
R1062	ERDS2TJ123T	CARBON 1/4W 12K	
R1201	ERJ3GEYJ123V	MGF CHIP 1/16W 12K	
R3008	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R3009	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3011	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R3012	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R3016	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R3017	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3018	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R3022	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R3028	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R3029	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R3036	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R3041	ERJ3GEYJ685V	MGF CHIP 1/16W 6.8M	
R3042	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R3060	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3066	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3070	ERJ3GEYJ273V	MGF CHIP 1/16W 27K	
R3080	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R3100	ERDS2TJ750T	CARBON 1/4W 75	
R3101	ERDS2TJ750T	CARBON 1/4W 75	
R3108	ERJ3GEYJ750V	CARBON 1/16W 75	
R3109	ERJ3GEYJ104V	MGF CHIP 1/16W 100K	
R3110	ERDS2TJ750T	CARBON 1/4W 75	
R3114	ERDS2TJ750T	CARBON 1/4W 75	
R3115	ERDS2TJ750T	CARBON 1/4W 75	
R3116	ERDS2TJ750T	CARBON 1/4W 75	
R3117	ERDS2TJ750T	CARBON 1/4W 75	
R3201	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R3202	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3203	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R3301	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4003	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R4004	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R4079	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4092	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4093	ERJ3GEYJ271V	MGF CHIP 1/16W 270	
R4094	ERJ3GEYJ334V	MGF CHIP 1/16W 330K	
R4097	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R4098	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R4101	ERJ3GEYJ113V	MGF CHIP 1/16W 11K (A,B,C)	
R4101	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K (F)	
R4102	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4103	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4106	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R4107	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R4108	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R4109	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R4201	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R4202	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4203	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R4204	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4209	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4210	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4211	ERJ3GEYJ362V	MGF CHIP1/16W 3.6K	
R4213	ERJ3GEYJ362V	MGF CHIP1/16W 3.6K	
R4214	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4215	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R4219	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	

Ref. No.	Part No.	Part Name & Description	Remarks
R4220	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R4224	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R4225	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R4230	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R4231	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R4236	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R4237	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R4253	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4254	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R4255	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R4257	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4259	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4262	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R4263	ERJ3GEYJ333V	MGF CHIP 1/16W 33K	
R4264	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R4265	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R4553	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4554	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R4557	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R4558	ERJ3GEYJ393V	MGF CHIP 1/16W 39K	
R4606	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R4802	ERJ3GEYJ331V	MGF CHIP 1/16W 330	
R6007	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6008	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6009	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6010	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R6011	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6013	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6014	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6015	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6016	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R6017	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6018	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R6019	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R6020	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6022	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6024	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6025	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6027	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6028	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6029	ERJ3GEYJ561V	MGF CHIP 1/16W 560	
R6034	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R6035	ERJ3GEYJ223V	MGF CHIP 1/16W 22K (A,B,C)	
R6039	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6047	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6050	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6051	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R6053	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6054	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R6056	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R6058	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6060	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R6061	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R6062	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6063	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6064	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6067	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6068	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6069	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6070	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6071	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6072	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6075	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6078	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6084	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R6086	ERJ3GEYJ105V	MGF CHIP 1/16W 1M	
R6087	ERJ3GEYJ392V	MGF CHIP 1/16W 3.9K	
R6089	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R6094	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R6100	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R6107	ERJ3GEYJ273V	MGF CHIP 1/16W 27K	
R6108	ERJ3GEYJ273V	MGF CHIP 1/16W 27K	
R6109	ERDS2TJ151T	CARBON 1/4W 150	

Ref. No.	Part No.	Part Name & Description	Remarks
R6114	ERJ3GEYJ273V	MGF CHIP 1/16W 27K	
R6115	ERJ3GEYJ273V	MGF CHIP 1/16W 27K	
R6116	ERDS2TJ121T	CARBON 1/4W 120	
R6135	ERJ3GEYJ223V	MGF CHIP 1/16W 22K (F)	
R6156	ERJ3GEYJ105V	MGF CHIP 1/16W 1M	
R6158	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R6166	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R6167	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R6171	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R6172	ERJ3GEYJ562V	MGF CHIP 1/16W 5.6K	
R6202	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6203	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6204	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6205	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6215	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6216	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R6217	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R6219	ERJ3GEYJ1R5V	CARBON 1/16W 1.5	
R6220	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R6222	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R6223	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R6224	ERJ3GEYJ1R2V	CARBON 1/16W 1.2	
R6225	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R6227	ERDS2TJ473T	CARBON 1/4W 47K	
R6311	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6312	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R6313	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R6314	ERJ3GEYJ203V	MGF CHIP 1/16W 20K	
R6321	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6322	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R6323	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R6324	ERJ3GEYJ203V	MGF CHIP 1/16W 20K	
R6331	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6332	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R6333	ERJ3GEYJ682V	MGF CHIP 1/16W 6.8K	
R6341	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6342	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R6415	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R6501	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R6502	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R6503	ERJ3GEYJ391V	MGF CHIP 1/16W 390	
R6504	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6505	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R6506	ERDS2TJ560T	CARBON 1/4W 56	
R6507	ERJ3GEYJ475V	MGF CHIP 1/16W 4.7M	
R6508	ERJ3GEYJ332V	MGF CHIP 1/16W 3.3K	
R6509	ERJ3GEYJ152V	MGF CHIP 1/16W 1.5K	
R6510	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R7004	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R7007	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R7011	ERJ3GEYJ221V	MGF CHIP 1/16W 220	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C1001	ECA1HHG470I	ELECTROLYTIC 50V 47UF	
C1004	F0CAF334A021	POLYESTER 125V 0.33UF	⚠
C1005	F0CAF334A021	POLYESTER 125V 0.33UF	⚠
C1006	F1H1C104A065	C CHIP 16V 0.1UF	
C1007	F2A2D1210003	ELECTROLYTIC 200V 120UF	⚠
C1008	F1H1C104A065	C CHIP 16V 0.1UF	
C1023	ECJ2VC1H101J	C CHIP 50V 100PF	
C1024	EEUFF0J122B	ELECTROLYTIC 6.3V 1200UF	
C1025	EEUFF1E471B	ELECTROLYTIC 25V 470UF	
C1026	ECA1HHG470I	ELECTROLYTIC 50V 47UF	
C1027	EEUFF0J122B	ELECTROLYTIC 6.3V 1200UF	
C1028	F2A1E3310040	ELECTROLYTIC 25V 330UF	
C1029	ECA1HHG470I	ELECTROLYTIC 50V 47UF	
C1030	ECJ2YB1H104K	C CHIP 50V 0.1UF	
C1031	EEUFF1A471B	ELECTROLYTIC 10V 470UF	
C1033	F2A1E3310040	ELECTROLYTIC 25V 330UF	
C1034	F2A1E3310040	ELECTROLYTIC 25V 330UF	
C1035	F2A1E3310040	ELECTROLYTIC 25V 330UF	
C1036	ECJ1VB1C105K	C CHIP 16V 1UF	
C1037	F2A1E3310040	ELECTROLYTIC 25V 330UF	
C1038	F1J1C1050011	C CHIP 16V 1UF	
C1039	F1J1C1050011	C CHIP 16V 1UF	
C1040	ECA1VHG101I	ELECTROLYTIC 35V 100UF	
C1041	ECA1HHG470I	ELECTROLYTIC 50V 47UF	
C1043	ECJ1VB1C105K	C CHIP 16V 1UF	
C1045	EEUFF1A221H	ELECTROLYTIC 10V 220UF	
C1046	ECEA1HKAR47	ELECTROLYTIC 50V 0.47UF	
C1047	ECJ2YB1H104K	C CHIP 50V 0.1UF	
C1051	ECEA1CKA220	ELECTROLYTIC 16V 22UF	
C1057	ECEA0JEE101	ELECTROLYTIC 6.3V 100UF	
C1065	F1BAH4720013	C CHIP 250V 4700PF	⚠
C1072	ECKN3A272KBP	C CHIP 1KV 2700PF	
C1073	ECKN3A271KBP	C CHIP 1KV 270PF	
C1074	ECQB1H223JF3	POLYESTER 50V 0.022UF	
C1075	ECQB1H103JF3	POLYESTER 50V 0.01UF	
C1076	ECQB1H473KF3	POLYESTER 50V 0.047UF	
C1077	ECQB1H104JF3	POLYESTER 50V 0.1UF	
C1301	F1J1C474A059	C CHIP 16V 0.47UF	
C1302	F1H1A105A025	C CHIP 10V 1UF	
C3007	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C3008	ECJ1VC1H151J	C CHIP 50V 150PF	
C3010	F1H1C104A041	C CHIP 16V 0.1UF	
C3011	F1H1C104A041	C CHIP 16V 0.1UF	
C3012	ECJ1VC1H330J	C CHIP 50V 33PF	
C3014	F1H1C104A041	C CHIP 16V 0.1UF	
C3015	F1H1C104A041	C CHIP 16V 0.1UF	
C3017	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C3018	ECEA1HKA4R7	ELECTROLYTIC 50V 4.7UF	
C3019	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C3021	F1H1A224A025	C CHIP 10V 0.22UF	
C3022	ECEA0JKA470	ELECTROLYTIC 6.3V 47UF	
C3023	F1H1C104A041	C CHIP 16V 0.1UF	
C3024	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C3029	F1H1C104A041	C CHIP 16V 0.1UF	
C3030	F1H1C104A041	C CHIP 16V 0.1UF	
C3032	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C3033	F1H1C104A041	C CHIP 16V 0.1UF	
C3036	F1H1C104A041	C CHIP 16V 0.1UF	
C3037	F1H1C104A041	C CHIP 16V 0.1UF	
C3039	ECEA1HKA3R3	ELECTROLYTIC 50V 3.3UF	
C3040	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C3041	F1H1E103A029	C CHIP 25V 0.01UF	
C3042	ECJ1VF1H103Z	C CHIP 50V 0.01UF	
C3046	ECJ1VC1H331J	C CHIP 50V 330PF	
C3049	F1H1E103A029	C CHIP 25V 0.01UF	
C3050	ECEA0JKA470	ELECTROLYTIC 6.3V 47UF	
C3051	ECJ1VB1A224K	C CHIP 10V 0.22UF	
C3052	ECEA0JKA470	ELECTROLYTIC 6.3V 47UF	
C3053	ECJ1VF1H103Z	C CHIP 50V 0.01UF	
C3054	ECJ1VF1H103Z	C CHIP 50V 0.01UF	
C3056	F1H1A105A025	C CHIP 10V 1UF	
C3059	ECJ1VC1H020C	C CHIP 50V 2PF	
C3060	ECJ1VF1E104Z	C CHIP 25V 0.1UF	
C3061	F1H1H102A219	C CHIP 50V 0.001UF	
C3062	F1H1C104A041	C CHIP 16V 0.1UF	
C3064	ECEA1HKA3R3	ELECTROLYTIC 50V 3.3UF	
C3065	ECEA1HKA2R2	ELECTROLYTIC 50V 2.2UF	
C3066	F1H1H472A219	C CHIP 50V 4700PF	
C3068	ECJ1VB1E333K	C CHIP 25V 0.033UF	
C3069	ECJ1VB0J474K	C CHIP 6.3V 0.47UF	
C3070	F1H1E223A029	C CHIP 25V 0.022UF	
C3075	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C3083	ECJ1VF1E104Z	C CHIP 25V 0.1UF	
C3202	F1H1C104A041	C CHIP 16V 0.1UF	
C3301	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C3302	ECJ1VF1E104Z	C CHIP 25V 0.1UF	
C3303	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C3304	F2A0J471A283	ELECTROLYTIC 6.3V 470UF	
C3305	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C3306	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4000	ECEA0JKA220	ELECTROLYTIC 6.3V 22UF	
C4005	ECEA1CKA100	ELECTROLYTIC 16V 10UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C4081	ECJ1VC1H150J	C CHIP 50V 15PF	
C4082	ECEA1HKA3R3	ELECTROLYTIC 50V 3.3UF	
C4085	ECJ1VB1H182K	C CHIP 50V 0.0018UF	
C4091	ECJ1VF1E104Z	C CHIP 25V 0.1UF	
C4092	ECEA0JKA221	ELECTROLYTIC 6.3V 220UF	
C4093	ECJ1VB1H102K	C CHIP 50V 1000PF	
C4094	ECEA1HKA2R2	ELECTROLYTIC 50V 2.2UF	
C4095	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C4096	ECEA1CKA330B	ELECTROLYTIC 16V 33UF	
C4097	ECJ1VB1H182K	C CHIP 50V 0.0018UF	
C4098	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C4100	ECQB1H333JF3	POLYESTER 50V 0.033UF	
C4101	ERJ3GEYJ113V	MGF CHIP 1/16W 11K (F)	
C4101	F1H1H471A789	C CHIP 50V 470PF (A,B,C)	
C4102	ECJ1VB1H182K	C CHIP 50V 0.0018UF	
C4103	F1H1E223A029	C CHIP 25V 0.022UF	
C4104	ECEA0JKA470I	ELECTROLYTIC 6.3V 47UF	
C4201	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4202	ECEA0JKA221	ELECTROLYTIC 6.3V 220UF	
C4203	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4204	F1H1C104A008	C CHIP 16V 0.1UF	
C4205	F1H1C104A041	C CHIP 16V 0.1UF	
C4206	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4207	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C4208	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4212	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C4213	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C4216	ECEA0JKA330	ELECTROLYTIC 6.3V 33UF	
C4217	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4218	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4219	ECJ1VB1E153K	C CHIP 25V 0.015UF	
C4220	F1H1C104A041	C CHIP 16V 0.1UF	
C4222	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C4224	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C4226	F1H1C104A041	C CHIP 16V 0.1UF	
C4231	ECJ1VF1C224Z	C CHIP 16V 0.22UF	
C4232	ECJ1VB1E153K	C CHIP 25V 0.015UF	
C4233	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4234	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4235	ECEA0JKA330	ELECTROLYTIC 6.3V 33UF	
C4240	ECEA0JKA470	ELECTROLYTIC 6.3V 47UF	
C4244	ECEA1HKA2R2	ELECTROLYTIC 50V 2.2UF	
C4245	ECJ1VF1H103Z	C CHIP 50V 0.01UF	
C4246	F1H1C104A041	C CHIP 16V 0.1UF	
C4247	ECEA1HKA3R3	ELECTROLYTIC 50V 3.3UF	
C4248	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C4249	F1H1C104A041	C CHIP 16V 0.1UF	
C4250	F1H1C104A041	C CHIP 16V 0.1UF	
C4252	F1H1E223A029	C CHIP 25V 0.022UF	
C4253	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4254	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C4257	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4258	ECEA1CKA101	ELECTROLYTIC 16V 100UF	
C4259	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4260	ECEA0JKA220	ELECTROLYTIC 6.3V 22UF	
C4261	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4262	ECEA1HKA010	ELECTROLYTIC 50V 1UF	
C4263	F1H1E223A029	C CHIP 25V 0.022UF	
C4264	ECEA1HKA3R3	ELECTROLYTIC 50V 3.3UF	
C4553	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4557	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4606	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C4607	F1H1H152A219	C CHIP 50V 1500PF	
C4801	F1H1C104A041	C CHIP 16V 0.1UF	
C4802	ECEA1EKA4R7	ELECTROLYTIC 25V 4.7UF	
C4803	ECJ1VC1H270J	C CHIP 50V 27PF	
C5083	F1H1C104A041	C CHIP 16V 0.1UF	
C5084	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C5085	ECJ1VB1E103K	C CHIP 25V 0.01UF	
C5087	ECJ1VB1E103K	C CHIP 25V 0.01UF	
C5089	ECJ1VB1E103K	C CHIP 25V 0.01UF	
C5091	ECJ1VB1E103K	C CHIP 25V 0.01UF	
C6034	ECJ1VF1E104Z	C CHIP 25V 0.1UF	
C6037	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C6038	ECJ1VC1H180J	C CHIP 50V 18PF	
C6039	ECJ1VC1H220J	C CHIP 50V 22PF	
C6044	ECJ1VC1H101J	C CHIP 50V 100PF	
C6045	ECJ1VC1H820J	C CHIP 50V 82PF	
C6047	ECJ1VB1H471K	C CHIP 50V 470PF	
C6048	ECJ1VC1H270J	C CHIP 50V 27PF	
C6049	ECJ1VF1H104Z	C CHIP 50V 0.1UF	
C6053	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C6054	F1H1H102A219	C CHIP 50V 0.001UF	
C6055	F1H1H102A219	C CHIP 50V 0.001UF	
C6056	ECJ1VC1H561J	C CHIP 50V 560PF	
C6071	ECJ1VC1H101J	C CHIP 50V 100PF	
C6072	ECJ1VC1H101J	C CHIP 50V 100PF	
C6078	ECJ1VF1H103Z	C CHIP 50V 0.01UF	
C6082	F1H1C104A041	C CHIP 16V 0.1UF	
C6086	ECJ1VC1H330J	C CHIP 50V 33PF	
C6092	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C6094	ECJ1VC1H681J	C CHIP 50V 680PF	
C6096	ECEA0JKN220I	ELECTROLYTIC 6.3V 22UF	
C6097	ECJ1VB1H392K	C CHIP 50V 3900PF	
C6098	ECEA0JKA221	ELECTROLYTIC 6.3V 220UF	
C6101	ECEA0JKA331	ELECTROLYTIC 6.3V 330UF	
C6110	ECJ1VF1H104Z	C CHIP 50V 0.1UF	
C6111	ECJ1VF1H104Z	C CHIP 50V 0.1UF	
C6137	ECJ2VB1E104K	C CHIP 25V 0.1UF	
C6147	ECJ1VF1H103Z	C CHIP 50V 0.01UF	
C6153	ECJ1VF1H104Z	C CHIP 50V 0.1UF	
C6154	ECJ1VB1H333K	C CHIP 50V 0.033UF	
C6156	ECJ1VF1A105Z	C CHIP 10V 1UF	
C6201	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C6202	ECJ1VB1C563K	C CHIP 16V 0.056UF	
C6203	ECJ1VB1C563K	C CHIP 16V 0.056UF	
C6204	ECJ1VB1C563K	C CHIP 16V 0.056UF	
C6205	ECJ1VB1C563K	C CHIP 16V 0.056UF	
C6206	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C6207	F2A1E2210040	ELECTROLYTIC 25V 220UF	
C6208	ECJ2VB1E104K	C CHIP 25V 0.1UF	
C6209	F1H1A224A025	C CHIP 10V 0.22UF	
C6210	F1H1E223A029	C CHIP 25V 0.022UF	
C6211	F1H1E223A029	C CHIP 25V 0.022UF	
C6212	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C6213	ECJ1VB1H102K	C CHIP 50V 1000PF	
C6215	F1H1H102A219	C CHIP 50V 0.001UF	
C6216	ECJ1VF1A105Z	C CHIP 10V 1UF	
C6217	ECJ1VB1H182K	C CHIP 50V 0.0018UF	
C6219	ECJ1VF1H104Z	C CHIP 50V 0.1UF	
C6221	ECEA1CKA101	ELECTROLYTIC 16V 100UF	
C6222	F1H1C104A041	C CHIP 16V 0.1UF	
C6223	F1H1C104A041	C CHIP 16V 0.1UF	
C6224	ECEA0JKA221	ELECTROLYTIC 6.3V 220UF	
C6225	F1H1C104A041	C CHIP 16V 0.1UF	
C6227	ECJ1VF1A105Z	C CHIP 10V 1UF	
C6408	ECJ1VF1H104Z	C CHIP 50V 0.1UF	
C6501	ECJ1VF1E104Z	C CHIP 25V 0.1UF	
C6506	ECEA0JKA470	ELECTROLYTIC 6.3V 47UF	
C7005	ECJ1VB1H102K	C CHIP 50V 1000PF	
C7006	ECEA0JKA331	ELECTROLYTIC 6.3V 330UF	
C7011	ECJ1VC1H270J	C CHIP 50V 27PF	
C7012	ECJ1VC1H270J	C CHIP 50V 27PF	
C7017	ECJ1VB1H102K	C CHIP 50V 1000PF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L1001	G0B183E00002	LINE FILTER 0.5A 18MH	⚠
L1004	G0A100HA0023	COIL 10UH	
L1005	G0A220GA0026	COIL 22UH	
L1006	G0A100HA0023	COIL 10UH	
L1008	G0A220GA0026	COIL 22UH	
L1010	J1ZZA0000001	RESONANT SNUBBER	
L1011	J0JHC0000031	EMI FILTER CHIP	
L1012	J0JHC0000031	EMI FILTER CHIP	
L1013	J0JHC0000031	EMI FILTER CHIP	

Ref. No.	Part No.	Part Name & Description	Remarks
L3012	G0C271JA0019	COIL 270UH	
L3018	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L3059	G1C120JA0036	COIL 12UH	
L3300	G0C101KA0030	COIL 100UH	
L3301	G0C150KA0045	COIL 15UH	
L3302	G0C680KA0045	COIL 68UH	
L3303	G0C330KA0045	COIL 33UH	
L4101	G0C221JA0021	COIL 220UH	
L4201	G0C101KA0030	COIL 100UH	
L4801	G0C220K00008	COIL 22UH	
L4804	J0JCC0000160	EMI FILTER CHIP	
L5084	G0C560KA0045	COIL 56UH	
L6002	G0C4R7JA0019	COIL 4.7UH	
L6003	G0C680KA0045	COIL 68UH	
L6004	G0C101KA0045	COIL 100UH	
L7016	G0C101KA0045	COIL 100UH	

CRYSTAL OSCILLATOR

Ref. No.	Part No.	Part Name & Description	Remarks
X3001	H0D357400068	CRYSTAL OSCILLATOR	
X6001	H0D120500017	CRYSTAL OSCILLATOR	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P1002	LSEK0642	CONNECTOR CABLE W/PLUG	
P3501	LSEK0540	GROUNDING WIRE	
P4001	K1MZ02A00003	FE CONNECTOR 2P	
P4002	K1MN06A00030	CONNECTOR 6P	
P5001	K1MN24A00057	CONNECTOR 24P	
P5002	K1MN09A00029	CONNECTOR 9P	
P6201	K1KA08A00290	CONNECTOR 8P	
P6202	K1KA02A00375	CONNECTOR 2P	
P6203	K1MN07A00020	CONNECTOR 7P	

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW6001	K0ZZ00000598	SWITCH	
SW6002	K0C111A00006	SWITCH	
SW6312	EVQ11A09K	SWITCH PUSH	
SW6313	EVQ11A09K	SWITCH PUSH	
SW6314	EVQ11A09K	SWITCH PUSH	
SW6321	EVQ11A09K	SWITCH PUSH	
SW6322	EVQ11A09K	SWITCH PUSH	
SW6323	EVQ11A09K	SWITCH PUSH	
SW6324	EVQ11A09K	SWITCH PUSH	
SW6331	EVQ11A09K	SWITCH PUSH	
SW6332	EVQ11A09K	SWITCH PUSH	
SW6333	EVQ11A09K	SWITCH PUSH	

FUSE & PROTECTOR

Ref. No.	Part No.	Part Name & Description	Remarks
F1001	K5D302AQ0003	FUSE 125V 3A	⚠
PR1003	UNH000600A	IC PROTECTOR 1.5A	⚠
or PR1003	D4FA2R50A002	IC PROTECTOR 1.5A	⚠
PR1004	UNH000600A	IC PROTECTOR 1.5A	⚠
or PR1004	D4FA2R50A002	IC PROTECTOR 1.5A	⚠
PR1005	UNH000600A	IC PROTECTOR 1.5A	⚠
or PR1005	D4FA2R50A002	IC PROTECTOR 1.5A	⚠
PR1007	UNH000600A	IC PROTECTOR 1.5A	⚠
or PR1007	D4FA2R50A002	IC PROTECTOR 1.5A	⚠

TRANSFORMER

Ref. No.	Part No.	Part Name & Description	Remarks
T1001	LSTP0128	SW TRANSFORMER	⚠
T4101	G2A472C00003	TRANSFORMER	

JACKS

Ref. No.	Part No.	Part Name & Description	Remarks
JK3001	K2HA612B0035	AUDIO/VIDEO JACK SOCKET	
JK3003	K2HZ105B0007	S-VHS JACK SOCKET	
JK3004	K2HA507B0003	AUDIO/VIDEO JACK SOCEKT	
JK4801	B3RAE0000030	IC, LINEAR	

PRINTED CIRCUIT BOARD ASSEMBLY

Ref. No.	Part No.	Part Name & Description	Remarks
E11	LSEP2237HA	FRONT JACK C.B.A.	RTL
E12	LSEP2230HA	OPERATION LED C.B.A.	RTL

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
712	VMD4258	PHOTO SENSOR HOLDER	
723	LSSC0708	S JACK FCC PLATE	
741	LSJA0550	AC CORD W/PLUG, AC 120V	⚠
743	ENG56D06G1F	TUNER,UHF/VHF NR	
771	EYF52BCY	FUSE HOLDER	

11.3.2. FRONT JACK C.B.A.

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R3102	ERJ3GEYJ750V	CARBON 1/16W 75	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P4591	LSJWD7S075AA	CONNECTOR CABLE W/OUT PLUG	

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW6311	EVQ21405R	SWITCH PUSH	

JACKS

Ref. No.	Part No.	Part Name & Description	Remarks
JK3002	K2HA306A0023	AUDIO/VIDEO JACK SOCKET	

11.3.3. OPERATION LED C.B.A.

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q6301	2SD0601ARL	TRANSISTOR SI NPN CHIP	
Q6302	2SD0601ARL	TRANSISTOR SI NPN CHIP	
Q6303	2SD0601ARL	TRANSISTOR SI NPN CHIP	
Q6304	2SD0601ARL	TRANSISTOR SI NPN CHIP	
Q6305	2SD0601ARL	TRANSISTOR SI NPN CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D6311	B3ABA0000452	LED GREEN	
D6312	B3AAA0000721	LED RED	
D6313	B3AFA0000065	LED YELLOW	
D6314	B3AFA0000065	LED YELLOW	
D6315	B3ABA0000452	LED GREEN	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R6301	ERJ6GEYJ301V	MGF CHIP 1/10W 300	
R6302	ERJ6GEYJ301V	MGF CHIP 1/10W 300	
R6303	ERJ6GEYJ301V	MGF CHIP 1/10W 300	
R6304	ERJ6GEYJ301V	MGF CHIP 1/10W 300	
R6305	ERJ6GEYJ301V	MGF CHIP 1/10W 300	
R6307	ERDS2TJ3R3	CARBON 1/4W 3.3	
R6308	ERJ6GEYJ470V	MGF CHIP 1/10W 47	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C6303	ECJ1VF1E104Z	C CHIP 25V 0.1UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C6304	ECEA0JKA331	ELECTROLYTIC 6.3V 330UF	
C6307	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L6302	G0C270KA0045	COIL 27UH	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P6302	LSJWDAS055AA	CONNECTOR CABLE W/OUT PLUG	

MISCELLANEOUS

Ref. No.	Part No.	Part Name & Description	Remarks
711	PNA4618M14VT	INFRARED RECEIVER UNIT	

11.3.4. DVD MAIN C.B.A.

COMPARISON CHART OF MODELS & MARKS

MODEL	MARK
PV-D4735S	A
PV-D4745	B
PV-D4745S	C
----------	D
----------	E
PV-D4745S-K	F
----------	G

INTEGRATED CIRCUITS

Ref. No.	Part No.	Part Name & Description	Remarks
IC8001	MN2DS03VP1H	IC, SYSTEM LSI	E.S.D.
IC8002	LSSK0058	IC, 16M FLASH MEMORY	E.S.D.
IC8003	C3ABPG000142	IC, 64M D RAM	E.S.D.
or IC8003	C3ABPG000133	IC, 64M SDRAM	E.S.D.
IC8004	LSSK0056	IC, 4K EEPROM	E.S.D.
IC8005	C0DBEZG00017	IC, LINEAR	
IC8401	C9ZB00000461	IC, LINEAR	
IC8501	C0FBBK000035	IC, LINEAR	
IC8503	C0ABBB000256	IC, LINEAR	
IC8801	C0GBG0000054	IC, LINEAR	

TRANSISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
Q8504	UNR521500L	TRANSISTOR SI NPN CHIP	
or Q8504	B1GBCFJA0006	TRANSISTOR SI NPN CHIP	
or Q8504	B1GBCFJA0013	TRANSISTOR SI NPN CHIP	
Q8505	UNR521500L	TRANSISTOR SI NPN CHIP	
or Q8505	B1GBCFJA0006	TRANSISTOR SI NPN CHIP	
or Q8505	B1GBCFJA0013	TRANSISTOR SI NPN CHIP	
Q8901	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q8901	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q8902	2SD1819A0L	TRANSISTOR SI NPN CHIP	
or Q8902	B1ABCF000020	TRANSISTOR SI NPN CHIP	
Q8903	2SB0709A0L	TRANSISTOR SI PNP CHIP	
or Q8903	B1ADCC000004	TRANSISTOR SI PNP CHIP	
or Q8903	B1ADCF000001	TRANSISTOR SI PNP CHIP	
or Q8903	B1ADCF000077	TRANSISTOR SI PNP CHIP	
Q8904	2SB0709A0L	TRANSISTOR SI PNP CHIP	
or Q8904	B1ADCC000004	TRANSISTOR SI PNP CHIP	
or Q8904	B1ADCF000001	TRANSISTOR SI PNP CHIP	
or Q8904	B1ADCF000077	TRANSISTOR SI PNP CHIP	
Q8905	UNR521100L	TRANSISTOR SI NPN CHIP	
or Q8905	B1GBCFJJ0001	TRANSISTOR SI NPN CHIP	
or Q8905	B1GBCFJJ0007	TRANSISTOR SI NPN CHIP	
or Q8905	B1GBCFJJ0035	TRANSISTOR SI NPN CHIP	
Q8906	UNR511500L	TRANSISTOR SI PNP CHIP	
or Q8906	B1GDCFJA0017	TRANSISTOR SI PNP CHIP	
or Q8906	B1GDCFJJ0025	TRANSISTOR SI PNP CHIP	

DIODES

Ref. No.	Part No.	Part Name & Description	Remarks
D8001	MA2J111008	DIODE SI	
or D8001	B0ACCK000005	DIODE SI	
or D8001	MA2J11100L	DIODE SI	

RESISTORS

Ref. No.	Part No.	Part Name & Description	Remarks
R8001	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8004	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R8005	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R8006	EXB38V820JV	ARRAY CHIP 82	
R8007	EXB38V820JV	ARRAY CHIP 82	
R8008	EXB38V820JV	ARRAY CHIP 82	
R8009	ERJ3GEYJ472V	MGF CHIP 1/16W 4.7K	
R8012	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8015	ERJ3GEYJ222V	MGF CHIP 1/16W 2.2K	
R8016	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R8017	ERJ3GEYJ221V	MGF CHIP 1/16W 220	
R8019	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R8020	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R8021	ERJ3GEYJ183V	MGF CHIP 1/16W 18K	
R8023	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8024	EXB38V820JV	ARRAY CHIP 82	
R8025	ERJ3GEYJ271V	MGF CHIP 1/16W 270	
R8026	ERJ3GEYJ271V	MGF CHIP 1/16W 270	
R8027	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8028	ERJ3GEYJ271V	MGF CHIP 1/16W 270	
R8029	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8030	ERJ3GEYJ270V	MGF CHIP 1/16W 27	
R8031	ERJ3GEYJ103V	MGF CHIP 1/16W 10K (B,C,F)	
R8032	ERJ3GEYJ103V	MGF CHIP 1/16W 10K (A)	
R8033	ERJ3GEYJ103V	MGF CHIP 1/16W 10K	
R8034	EXB38V820JV	ARRAY CHIP 82	
R8035	EXB38V820JV	ARRAY CHIP 82	
R8036	EXB38V820JV	ARRAY CHIP 82	
R8037	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8038	ERA3YED273V	CARBON 1/16W 27K	
R8039	ERJ3GEYJ105V	MGF CHIP 1/16W 1M	
R8040	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8041	ERA3YED221V	CARBON 1/16W 220	
R8042	ERJ3GEYJ330V	MGF CHIP 1/16W 33	
R8043	ERA3YED332V	CARBON 1/16W 3.3K	
R8044	ERA3YED151V	CARBON 1/16W 150	
R8046	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R8047	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8048	ERA3YED822V	CARBON 1/16W 8.2K	
R8049	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R8051	EXB38V820JV	ARRAY CHIP 82	
R8052	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R8053	ERJ3GEYJ822V	MGF CHIP 1/16W 8.2K	
R8056	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8057	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	

Ref. No.	Part No.	Part Name & Description	Remarks
R8058	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8059	ERJ1TYJ4R7U	MGF CHIP 1W 4.7	
R8060	ERA3YED103V	CARBON 1/16W 10K	
R8061	ERA3YED202V	CARBON 1/16W 2K	
R8065	ERJ3GEYJ6R8V	MGF CHIP 1/16W 6.8	
R8066	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R8067	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R8068	ERJ3GEYJ101V	MGF CHIP 1/16W 100	
R8071	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8418	ERA3YED121V	CARBON 1/16W 120	
R8419	ERA3YED121V	CARBON 1/16W 120	
R8420	ERA3YED121V	CARBON 1/16W 120	
R8421	ERA3YHD560V	CARBON 1/16W 56	
R8422	ERA3YHD560V	CARBON 1/16W 56	
R8423	ERA3YHD680V	CARBON 1/16W 68	
R8424	ERA3YHD680V	CARBON 1/16W 68	
R8425	ERA3YHD680V	CARBON 1/16W 68	
R8426	ERA3YHD330V	CARBON 1/16W 33	
R8427	ERA3YHD330V	CARBON 1/16W 33	
R8501	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8502	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8503	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8504	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8518	ERJ3GEYF822V	MGF CHIP 1/16W 8.2K	
R8520	ERJ3GEYF822V	MGF CHIP 1/16W 8.2K	
R8533	ERJ3GEYF163V	MGF CHIP 1/16W 16K	
R8534	ERJ3GEYJ622V	MGF CHIP 1/16W 6.2K	
R8535	ERJ3GEYF163V	MGF CHIP 1/16W 16K	
R8536	ERJ3GEYJ622V	MGF CHIP 1/16W 6.2K	
R8557	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R8558	ERJ3GEYJ471V	MGF CHIP 1/16W 470	
R8565	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R8566	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8567	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R8568	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8572	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	
R8573	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
R8801	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R8802	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R8804	ERJ3GEYJ823V	MGF CHIP 1/16W 82K	
R8805	ERJ3GEYJ823V	MGF CHIP 1/16W 82K	
R8902	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8903	ERJ3GEYJ223V	MGF CHIP 1/16W 22K	
R8904	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R8905	ERJ3GEYJ331V	MGF CHIP 1/16W 330	
R8906	ERJ3GEYJ821V	MGF CHIP 1/16W 820	
R8907	ERJ3GEYJ331V	MGF CHIP 1/16W 330	
R8908	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R8909	ERJ3GEYJ560V	MGF CHIP 1/16W 56	
R8910	ERJ12YJ270U	MGF CHIP 1/2W 27	
R8911	ERJ12YJ270U	MGF CHIP 1/2W 27	
R8912	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R8913	ERJ3GEYJ473V	MGF CHIP 1/16W 47K	
R8914	ERJ3GEYJ153V	MGF CHIP 1/16W 15K	
R8917	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8918	ERJ3GEYJ100V	MGF CHIP 1/16W 10	
R8919	ERJ3GEYJ3R9V	MGF CHIP 1/16W 3.9	
R8920	ERJ3GEYJ102V	MGF CHIP 1/16W 1K	

CAPACITORS

Ref. No.	Part No.	Part Name & Description	Remarks
C8001	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8002	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8003	ECEA0JKA331	ELECTROLYTIC 6.3V 330UF	
C8004	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8006	ECJ1VB1E103K	C CHIP 25V 0.01UF	
C8007	F1H1C104A041	C CHIP 16V 0.1UF	
C8008	F1H1C104A041	C CHIP 16V 0.1UF	
C8009	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8010	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8011	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8012	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8013	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8014	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8015	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8016	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8017	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8018	ECEA0JKA331	ELECTROLYTIC 6.3V 330UF	
C8019	F1H1C104A041	C CHIP 16V 0.1UF	
C8020	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8021	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C8022	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C8023	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C8024	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8025	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8026	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C8027	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8028	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C8029	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8030	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C8031	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8032	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8033	ECJ1VB1E333K	C CHIP 25V 0.033UF	
C8034	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C8035	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8036	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8037	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8038	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C8039	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8040	ECJ1VB1H562K	C CHIP 50V 5600PF	
C8041	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8042	ECJ1VB1E183K	C CHIP 25V 0.018UF	
C8043	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C8044	F1H1C104A041	C CHIP 16V 0.1UF	
C8045	F1H1C104A041	C CHIP 16V 0.1UF	
C8046	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8047	F1H1C104A041	C CHIP 16V 0.1UF	
C8048	F1H1C104A041	C CHIP 16V 0.1UF	
C8049	F1H1C104A041	C CHIP 16V 0.1UF	
C8050	F1H1C104A041	C CHIP 16V 0.1UF	
C8051	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8052	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C8053	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8054	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8055	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8056	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8057	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8058	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C8059	ECJ1VC1H330J	C CHIP 50V 33PF	
C8060	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8061	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8062	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8063	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8064	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8065	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8066	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8067	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8068	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8069	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8070	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8071	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C8072	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C8073	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C8074	ECJ1VB1H102K	C CHIP 50V 1000PF	
C8075	F1H1C104A041	C CHIP 16V 0.1UF	
C8076	ECJ1VC1H050C	C CHIP 50V 5PF	
C8077	ECJ1VC1H150J	C CHIP 50V 15PF	
C8078	ECJ1VC1H150J	C CHIP 50V 15PF	
C8080	ECJ1VB1H102K	C CHIP 50V 1000PF	
C8081	ECJ1VB1H102K	C CHIP 50V 1000PF	
C8082	ECJ1VB1H102K	C CHIP 50V 1000PF	
C8083	ECJ1VB1H102K	C CHIP 50V 1000PF	
C8086	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C8090	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C8091	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C8401	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	

Ref. No.	Part No.	Part Name & Description	Remarks
C8402	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8403	ECEA0JKA331	ELECTROLYTIC 6.3V 330UF	
C8404	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8430	ECEA0JKA221	ELECTROLYTIC 6.3V 220UF	
C8431	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8434	ECJ1VB1H103K	C CHIP 50V 0.01UF	
C8435	F1H1A105A025	C CHIP 10V 1UF	
C8436	F1H1A105A025	C CHIP 10V 1UF	
C8439	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8440	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8441	ECEA0JKA220	ELECTROLYTIC 6.3V 22UF	
C8443	F1H1C104A041	C CHIP 16V 0.1UF	
C8444	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C8445	ECEA0JKA220	ELECTROLYTIC 6.3V 22UF	
C8448	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C8449	ECEA0JKA220	ELECTROLYTIC 6.3V 22UF	
C8450	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C8451	ECEA0JKA220	ELECTROLYTIC 6.3V 22UF	
C8452	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C8453	ECEA0JKA101	ELECTROLYTIC 6.3V 100UF	
C8454	ECEA0JKA220	ELECTROLYTIC 6.3V 22UF	
C8455	ECEA0JKA220	ELECTROLYTIC 6.3V 22UF	
C8504	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8505	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C8506	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8507	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C8508	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C8512	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C8513	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C8520	ECEA1AKA330I	ELECTROLYTIC 10V 33UF	
C8521	ECEA1CKA101	ELECTROLYTIC 16V 100UF	
C8522	F1H1C104A041	C CHIP 16V 0.1UF	
C8523	ECEA1AKA330I	ELECTROLYTIC 10V 33UF	
C8536	ECJ1VC1H101J	C CHIP 50V 100PF	
C8537	ECJ1VC1H101J	C CHIP 50V 100PF	
C8544	ECJ1VB1H102K	C CHIP 50V 1000PF	
C8545	ECJ1VB1H102K	C CHIP 50V 1000PF	
C8553	F1H1H472A219	C CHIP 50V 4700PF	
C8555	F1H1H472A219	C CHIP 50V 4700PF	
C8568	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C8569	ECEA1CKA100	ELECTROLYTIC 16V 10UF	
C8803	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8805	F1H1A105A025	C CHIP 10V 1UF	
C8807	F1K1A106A005	C CHIP 10V 10UF	
C8808	ECEA1AKA330I	ELECTROLYTIC 10V 33UF	
C8809	F1H1C104A041	C CHIP 16V 0.1UF	
C8813	F1H1A105A025	C CHIP 10V 1UF	
C8901	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8905	F1H1C104A041	C CHIP 16V 0.1UF	
C8907	F1H1C104A041	C CHIP 16V 0.1UF	
C8908	ECEA0JKA470	ELECTROLYTIC 6.3V 47UF	
C8909	ECEA0JKA470	ELECTROLYTIC 6.3V 47UF	
C8911	ECJ1VB1H102K	C CHIP 50V 1000PF	
C8917	ECJ2FB0J106K	C CHIP 6.3V 10UF	
C8920	ECJ1VB0J105K	C CHIP 6.3V 1UF	
C8921	ECJ1VC1H560J	C CHIP 50V 56PF	
C8922	ECJ1VC1H560J	C CHIP 50V 56PF	

FILTERS

Ref. No.	Part No.	Part Name & Description	Remarks
FL8502	J0HAAG000015	EMI FILTER CHIP	

COILS

Ref. No.	Part No.	Part Name & Description	Remarks
L8001	J0JCC0000117	EMI FILTER CHIP	
L8002	J0JDC0000002	EMI FILTER CHIP	
L8005	J0JDC0000002	EMI FILTER CHIP	
L8006	J0JCC0000215	EMI FILTER CHIP	
L8007	J0JDC0000002	EMI FILTER CHIP	
L8008	J0JDC0000002	EMI FILTER CHIP	
L8009	J0JDC0000002	EMI FILTER CHIP	
L8010	J0JHC0000027	EMI FILTER CHIP	
L8011	J0JCC0000215	EMI FILTER CHIP	
L8012	J0JCC0000215	EMI FILTER CHIP	
L8013	J0JCC0000215	EMI FILTER CHIP	
L8014	J0JCC0000063	EMI FILTER CHIP	
L8015	J0JCC0000063	EMI FILTER CHIP	
L8016	J0JCC0000063	EMI FILTER CHIP	
L8017	J0JCC0000063	EMI FILTER CHIP	
L8018	J0JCC0000063	EMI FILTER CHIP	
L8019	J0JCC0000215	EMI FILTER CHIP	
L8020	J0JCC0000215	EMI FILTER CHIP	
L8021	J0JCC0000215	EMI FILTER CHIP	
L8409	J0JHC0000078	EMI FILTER CHIP	
L8411	ERJ3GEY0R00V	MGF CHIP 1/16W 0	
L8412	J0JHC0000068	EMI FILTER CHIP	
L8413	J0JHC0000078	EMI FILTER CHIP	
L8414	J0JHC0000054	EMI FILTER CHIP	
L8415	J0JHC0000068	EMI FILTER CHIP	
L8416	J0JBC0000010	CHIP BEAD INDUCTOR	
L8418	J0JBC0000010	CHIP BEAD INDUCTOR	
L8419	J0JBC0000010	CHIP BEAD INDUCTOR	
L8420	J0JBC0000010	CHIP BEAD INDUCTOR	
L8421	J0JBC0000010	CHIP BEAD INDUCTOR	
L8422	J0JBC0000010	CHIP BEAD INDUCTOR	
L8424	J0JBC0000010	CHIP BEAD INDUCTOR	
L8429	J0JHC0000078	EMI FILTER CHIP	
L8431	J0JCC0000063	EMI FILTER CHIP	
L8433	J0JCC0000063	EMI FILTER CHIP	
L8434	J0JCC0000063	EMI FILTER CHIP	
L8435	J0JCC0000063	EMI FILTER CHIP	
L8436	J0JCC0000063	EMI FILTER CHIP	
L8437	J0JCC0000063	EMI FILTER CHIP	
L8438	ERJ8GEY0R00V	MGF CHIP 1/8W 0	
L8439	ERJ8GEY0R00V	MGF CHIP 1/8W 0	
L8501	J0JBC0000010	CHIP BEAD INDUCTOR	
L8503	J0JBC0000010	CHIP BEAD INDUCTOR	
L8504	J0JBC0000010	CHIP BEAD INDUCTOR	
L8517	J0JCC0000063	EMI FILTER CHIP	
L8518	J0JDC0000002	EMI FILTER CHIP	
L8901	J0JDC0000002	EMI FILTER CHIP	

CRYSTAL OSCILLATOR

Ref. No.	Part No.	Part Name & Description	Remarks
X8001	H0J270500066	CRYSTAL OSCILLATOR	

PIN HEADERS

Ref. No.	Part No.	Part Name & Description	Remarks
P8401	K1MN24A00057	CONNECTOR 24P	
P8402	K1MR11A00017	CONNECTOR 11P	
P8901	K1MN25B00070	CONNECTOR 25P	

11.3.5. DVD SUB C.B.A.

SWITCHES

Ref. No.	Part No.	Part Name & Description	Remarks
SW8951	ESE31R01T	SWITCH PUSH	
SW8952	ESE31L01T	SWITCH PUSH	